DOCUMENT RESUME

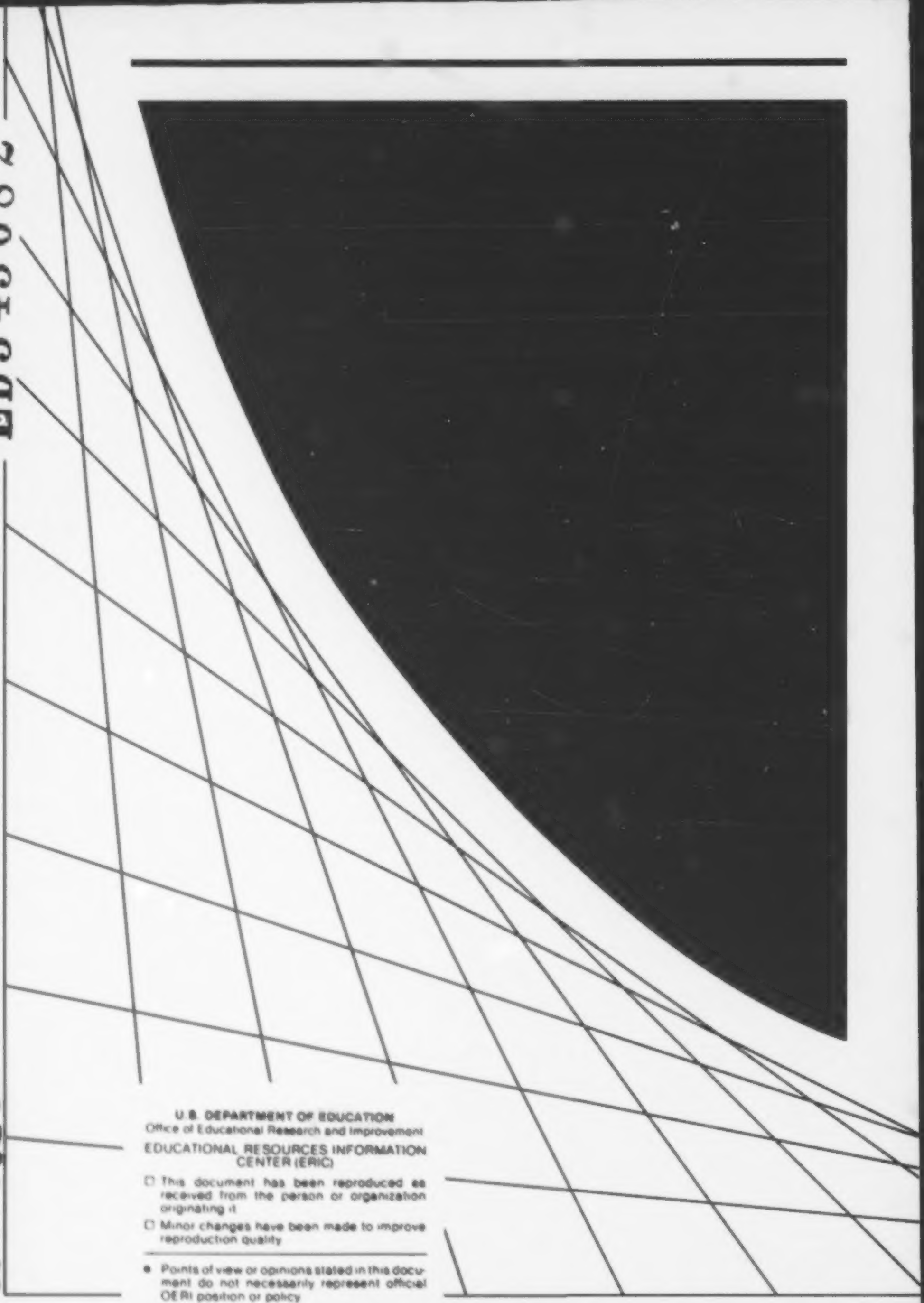
ED 343 082 CS 010 853

AUTHOR	Beach, Richard, Ed.; And Others
TITLE	Multidisciplinary Perspectives on Literacy Research.
INSTITUTION	National Conference on Research in English.; National Council of Teachers of English, Urbana, Ill.
REPORT NO	ISBN-0-8141-3219-7
PUB DATE	92
NOTE	417p.; Papers presented at the Perspectives on Literacy Conference (2nd, February 1990).
AVAILABLE FROM	National Council of Teachers of English, 1111 Kenyon Rd., Urbana, IL 61801 (Stock No. 32197-3050; $16.95 members, $22.95 nonmembers).
PUB TYPE	Collected Works - Conference Proceedings (021)
EDRS PRICE	MF01/PC17 Plus Postage.
DESCRIPTORS	Cultural Context; Higher Education; *Interdisciplinary Approach; *Literacy; *Research Methodology
IDENTIFIERS	*Educational Issues

ABSTRACT

This collection of conference papers explores the application of a range of different disciplinary perspectives to studying literacy, drawing not only on newer linguistic and cognitive psychological orientations, but also on cultural anthropology, sociolinguistics, reader-response theory, critical theory, and poststructuralist theory. The collection is organized in four major sections as follows: Difficulties in Adopting a Multicultural Approach; Disciplinary Perspectives and Methodological Approaches; Specific Disciplinary Perspectives on Literacy Research; and Reaction Papers. Following a foreword by Jerome C. Harste, the papers and their authors are as follows: (1) "Introduction" (Richard Beach and others); (2) "Multiple Perspectives: Issues and Directions" (Judith L. Green); (3) "Ethnomethodology and the Possibility of a Metaperspective on Literacy Research" (James L. Heap); (4) "Reconciling the Qualitative and Quantitative" (George Hillocks, Jr.); (5) "First, Catch the Rabbit: Methodological Imperative and the Dramatization of Dialogic Reading" (Russell A. Hunt and Douglas Vipond); (6) "Adopting Multiple Stances in Conducting Literacy Research" (Richard Beach); (7) "Modes of Inquiry in Literacy Studies and Issues of Philosophy of Science" (Timothy Shanahan); (8) "A Psychological Perspective Applied to Literacy Studies" (John R. Hayes); (9) "Some Issues Concerning Differences among Perspectives in Literacy Research" (Michael L. Kamil); (10) "Changing Views of Language in Education: The Implications for Literacy Research" (Jenny Cook-Gumperz and John J. Gumperz); (11) "Studying Language and Literacy through Events, Particularity, and Intertextuality" (David Bloome and Francis M. Bailey); (12) "Literacy Research in Community and Classrooms: A Sociocultural Approach" (Luis C. Moll); (13) "World Knowledge, Inferences, and Questions" (Arthur C. Graesser and others); (14) "Inquiries into the Nature and Construction of Literary Texts: Theory and Method" (Joanne M. Golden); (15) "Articulating Poststructural Theory in Research on Literacy" (Linda Brodkey); (16) "Literacy Research and the Postmodern Turn: Cautions from the Margins" (Peter McLaren); (17) "Multiple Perspectives on Multiple Perspectives" (Diane Stephens and P. David Pearson); (18) "Intuition and Ideology: Exploring the Ecosystem" (Susan Hynds); (19) "What It Means To Be Literate" (Robert Gundlach); (20) "Multidisciplinary Research on Literacy and the Possibility of Educational Change" (Marjorie Siegel); (21) and "What I Learned at This Conference: A Personal Narrative of a Literacy Event" (Ann Matsuhashi Feldman). (SR)

ED343082



CS 010853

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Multidisciplinary Perspectives on Literacy Research

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Book Design: Interior, Tom Kovacs for TGK Design; cover, Doug Burnett

NCTE Stock Number: 32197-3050

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Prior to publication, this manuscript was submitted to the National Conference on Research in English for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of the National Conference on Research in English.

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Library of Congress Cataloging-in-Publication Data

Multidisciplinary perspectives on literacy research / edited by
Richard Beach . . . [et al.].
p. cm.
Report of a meeting held in Feb. 1990 sponsored by NCRE.
Includes bibliographical references (p.) and index.
ISBN 0-8141-3219-7
1. Language arts—Research—Congresses. 2. Language arts—
Research—Methodology—Congresses. 3. Applied linguistics—
Research—Congresses. I. Beach, Richard. II. National Conference
on Research in English.
LB1576.M85 1992
428'.0072—dc20 91-35674
CIP

Contents

Foreword ix

1. Introduction 1
Richard Beach, Judith L. Green, Michael L. Kamil, and Timothy Shanahan

I Difficulties in Adopting a Multidisciplinary Approach

2. Multiple Perspectives: Issues and Directions 19
Judith L. Green

3. Ethnomethodology and the Possibility of a Metaperspective on Literacy Research 35
James L. Heap

4. Reconciling the Qualitative and Quantitative 57
George Hillocks, Jr.

II Disciplinary Perspectives and Methodological Approaches

5. First, Catch the Rabbit: Methodological Imperative and the Dramatization of Dialogic Reading 69
Russell A. Hunt and Douglas Vipond

6. Adopting Multiple Stances in Conducting Literacy Research 91
Richard Beach

7. Modes of Inquiry in Literacy Studies and Issues of Philosophy of Science 111
Timothy Shanahan

8. A Psychological Perspective Applied to Literacy Studies 125
John R. Hayes

9. Some Issues Concerning Differences among Perspectives in Literacy Research 141
Michael L. Kamil

III Specific Disciplinary Perspectives on Literacy Research

10. Changing Views of Language in Education: The Implications for Literacy Research 151
Jenny Cook-Gumperz and John J. Gumperz

11. Studying Language and Literacy through Events, Particularity, and Intertextuality 181
David Bloome and Francis M. Bailey

12. Literacy Research in Community and Classrooms: A Sociocultural Approach 211
Luis C. Moll

13. World Knowledge, Inferences, and Questions 245
Arthur C. Graesser, Joseph P. Magliano, and Paula M. Tidwell

14. Inquiries into the Nature and Construction of Literary Texts: Theory and Method 275
Joanne M. Golden

15. Articulating Poststructural Theory in Research on Literacy 293
Linda Brodkey

16. Literacy Research and the Postmodern Turn: Cautions from the Margins 319
Peter McLaren

IV Reaction Papers

17. Multiple Perspectives on Multiple Perspectives 343
Diane Stephens and P. David Pearson

18. Intuition and Ideology: Exploring the Ecosystem 353
Susan Hynds

19. What It Means to Be Literate 365
Robert Gundlach

20. Multidisciplinary Research on Literacy and the Possibility of Educational Change 373
    Marjorie Siegel

21. What I Learned at This Conference: A Personal Narrative of a Literacy Event 385
    Ann Matsuhashi Feldman

Subject Index 393

Author Index 401

Editors 411

Contributors 413

Foreword

Jerome C. Harste
Indiana University

My favorite research question came from an international student at Indiana University who was taking my doctoral seminar on "A Socio-Semiotic Perspective on Literacy." After a particularly heated discussion on the relative merits of various research methodologies for studying language learning, she came up to me and said that she "needed" an appointment to see me. I asked, "What about?" She said, "About what we were talking about tonight in class. I don't understand."

Yueh-Hung Tseng showed up promptly at nine the next morning. I invited her into my office. She opened her spiral notebook to the page containing notes from the discussion of the past evening. Scanning the page, she announced, "Here it is! What does this mean, 'nauseous positivism'?"

I fully realize that her question—my favorite ever from a graduate student—tells you as much about me and what goes on in doctoral seminars at Indiana as it does Yueh-Hung Tseng. But it is because of this, in fact, that I decided to use it as an opening to this volume. Partly my decision is rooted in my wanting you to understand that "that's just the kind of guy I am" (to quote David Bleich). The other part is that I want you to understand the passion of the debate, represented in these pages, that rages in the field of language research. To not sense this passion is to miss out on the history of educational research and to fail to understand your role in the making and shaping of that future.

Although it is clear from this language story that I cannot claim innocence, the point is that "others"—too often "others" who think they have been neutral—are not and cannot claim innocence either. The realization that to do language research is to have one's hands in a theoretical, methodological, and political cookie jar much bigger than oneself has been a hard pill for the profession to swallow. This is particularly so since most graduate schools that prepare educational researchers still treat research methodologies as options, rather than as theoretical debates. To not see research methodologies as theoretical positions is to put the cart before the horse and to fail to understand how the instruments we use determine what we see. The unfortunate result is that rarely do researchers roll up their sleeves and have at it. Instead we pussyfoot around, avoiding all of the real issues and coming off looking as if we believe eclecticism is an educational position from which one can grow. To say "I will select my methodology based on my research question" is to fail to realize that methodologies have in them theories of language, learning, and knowing. Paint-by-number research is neither innocent nor neutral.

For me this volume demonstrates a hard-won principle of language education research; namely, that both "the what" and "the how" of language research are important. Although it is generally understood that "what you research" influences how you ought to go about doing research, the reverse has not been the case; that is, "how you research" influences—if not determines—what you are likely to learn!

The battle to establish this principle has been going on in language education research circles for some time. Despite the look of this volume, the argument has not always been pleasant. What this volume gives is space to present alternative views. Legitimizing the space for alternate voices to be heard has not been easy. Being an alternate voice has not made one popular. It has meant taking positions and interrogating underlying assumptions about language, learning, and epistemology; others' as well as one's own.

Some will see this volume as representing a maturing of the field of language education research. Here, for the first time, persons from a variety of disciplines present their approach to language research, demonstrate what data from this perspective look like, and explicate the assumptions upon which it is based. Readers, I think, will conclude that different perspectives give us different "truths," and that future conversations could be enriched by hearing multiple voices.

It is important that we recognize the breakthrough this volume represents and compliment the organizers of the conference on which this volume is based. These organizers, and now editors of this volume, had the intuition that the time was ripe to move the field forward. And they were right. A meeting of the minds as displayed here probably could not have been done before. Persons from various research traditions have just started being civil to one another.

Midway through the conference, P. David Pearson turned to me as John Hayes was speaking and whispered, "See, Harste, if all positivists were this reasonable, even you could accept them." While it is true that I was impressed with Professor Hayes's ability to examine the assumptive base on which he operates, I still cannot "accept" his methodology for educational research. Nor can I easily accept the tolerance for alternate perspectives displayed at the conference, knowing full well that the majority of our professional journals still largely publish positivistic research.

So lest readers not recognize me (I'm known as a critic, after all), let me say that while I recognize the volume's strengths, I also see its weaknesses. The first of these is the illusion which the volume gives that all research methodologies are equal. Readers go skipping merrily through the tulips—a little cognitive positivism, a little positivistic ethnography, a little semiotics, and so on. I have trouble with this. Given what we know about language (as an open semiotic), learning (as a tool and toy for outgrowing one's self), and knowledge (as socially constituted), not all methodologies are equal for me. Some violate what we know. Some do not build off of what educational research is, adopting an anti-educational, if not anti-intellectual, stance.

The second problem with the volume is that it gives the illusion that others—other researchers, other disciplines—have faced and solved language education's research problems. All we need to do is search these disciplines out and adopt their procedures to address our own needs. I articulated my position on this matter in my presidential address at the annual meeting of the National Reading Conference (1988). I stand by what I said then and wish only that I had made these statements in terms of language education more generally, rather than reading specifically:

> Basic research in education is different from basic research in psychology, sociology, or linguistics . . . [F]indings in these disciplines must still be interpreted and tested by basic educational research if they are to result in an improved theory of literacy instruction and improved educational practice. Many educational researchers . . . do not seem to understand this. Instead of doing educational research, my assessment . . . is that the reading and writing educators who do research try to act like cognitive psychologists, sociologists, or quasi-linguists . . . rather than attempting to build a basic methodology of their own. . . . Good instructional research synthesizes and explicates the curricular premises upon which it is conducted, tracks the collaborative learning that participants engage in as a function of curriculum, and documents its value by demonstrating reflexivity in terms of original premises and curricular growth on the part of all participants. This is but a start. The agenda ahead for educators of all kinds is to develop a research methodology for their discipline. They must begin by not being afraid to acknowledge who they are, and by conducting

> and reporting real educational inquiries in real instructional settings. To further accomplish this new agenda, teachers must become researchers, and researchers teachers. (pp. 10–11)

From my perspective, we keep putting off the very important business of developing a research methodology that acknowledges the collaborative and change-oriented nature of our own discipline. Instead we look to other disciplines. Rather than understand that new criteria for research must come from the quality of the conversation itself, we continue to buy into a transmission model of knowing, assuming the criteria for judging lies outside ourselves and the conversation we are having.

I would argue that the environments we envision to explore language and support inquiry will determine what we will find as well as what we come to know. In my estimation, language research must be rooted in our envisionments of education and the role that our discipline (language and language education) plays in learning. I firmly believe that the way we teach and research language affects the kind of profession, as well as society, we create. What a new theory of language research changes says a lot about what that new theory of language research is and whether or not it has value. Education is about the business of altering social relationships. If research is to improve education, language researchers need to begin by interrogating and rethinking their relationship to those being researched. Too often our relationship perpetuates what is.

Having said this much, I want to conclude by saying that I believe one of the great dangers of research is the illusion that those who do it and the methodologies that they use are innocent. This myth is begun in graduate school and perpetuated when particular methodologies have a stranglehold on a discipline. I see the methodological agenda ahead as a continuing struggle to force both researchers and methodologies to speak.

So I am back to being positive and to where I began. For it is precisely these dangers and agendas that make this volume such an important contribution to the literature. I personally hope this volume is read widely and becomes a staple in graduate research seminars in language education. I know it will at Indiana University.

I trust the learning process. By hearing new voices, new conversations will begin. I have not only tried to set a perspective but tried to give you a sample of the kinds of conversations that I hope this volume stimulates. I know I need to be more patient. The conversations I want to hear will come. As educators we need to savor the present as well as be able to see the future through our students' eyes. But that is why forewords are important: to set things in context and to help readers remember the quest. The real trick will be putting in place a structure whereby new conversations can continue.

NCRE and NCTE's Assembly on Research are both dedicated to furthering research in English. The questions this volume raises are ones that need to be discussed and debated. Given the relationship between "the what" and "the how" of research, I am fortunate indeed to have been president of NCRE at the time when conversations of this significance could reach the floor of the profession. Your involvement in the future will ensure that they continue.

Reference

Harste, J. C. (1988). Tomorrow's readers today: Becoming a profession of collaborative learners. In J. Readence & R. Scott Baldwin (Eds.), *Dialogues in literacy research (The 37th Yearbook of the National Reading Conference)* (pp. 3–13). Chicago: National Reading Conference.

1 Introduction

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In 1976, a conference on "perspectives on literacy" was convened to examine the research issues related to literacy (Beach & Pearson, 1977). In examining various issues of literacy research, that collection focused on literacy primarily from the perspective of linguistic or rhetorical analysis. There was scant reference to the cognitive "schema theory" perspective that emerged in the late 1970s. Most of the research referred to was experimental; there was little or no mention of anthropological and/or ethnographical research methods. Nor was there mention of cultural or literary perspectives reflected in recent feminist or poststructuralist critical theory. And the "literacy crisis" of concern to many in the 1980s was defined primarily as an academic problem, rather than as a problem influencing all segments of society.

Given the prevailing linguistic and rhetorical disciplinary orientation of the 1960s and 1970s, the 1976 conference papers were primarily concerned with matters of text comprehension and readability: in what ways can texts be written so that they are understandable, and how can students be taught to understand texts. And, applying theories of "social cognition," pragmatics, and rhetoric, some papers addressed the need for writers to consider the social implications of their writing.

The fields of linguistics, rhetoric, and cognitive psychology, as constituted in 1976, shaped the papers' definition of problems and methods. In turn, the research problems of such topics as teaching reading comprehension "skills," rating writing quality, determining readability, and defining "syntactical maturity" reflected the literacy curriculums of the 1960s and 1970s. The methodology employed in the research papers—largely experimental—reflected the prevailing research orientation of that period.

Some fifteen years later, in February 1990, a second conference dealing with "perspectives on literacy" was sponsored by the National Conference on Research in English, in collaboration with the NCTE Assembly on Research. The papers resulting from that conference make up the collection you are about to read. When compared to the 1976 conference, these papers represent a dramatic broadening and revision of disciplinary and methodological perspectives. They draw not only on newer linguistic and cognitive psychological orientations, but also on cultural anthropology, sociolinguistics, "reader-response" theory, "critical theory," and poststructuralist theory.

Multidisciplinary Perspectives on Literacy Research: The Present

The purpose of this conference, and this resulting volume, was to explore the application of a range of different disciplinary perspectives to studying literacy.

As Jerry Harste argues in his foreword, the tensions between these perspectives remain. In organizing the conference and this collection, we openly acknowledge that the tensions inherent in competing disciplinary perspectives will never be resolved. Rather than shying away from an examination of these tensions, the literacy research community would be best served by an open, ongoing debate about the assumptions shaping its research methodology. In order to highlight the differences between these assumptions, we wanted researchers from a range of different disciplinary perspectives to make explicit their underlying theoretical perspectives and assumptions. In that way, other researchers could then debate the validity of these competing perspectives as ways of understanding literacy.

Since 1976, the assumptions shaping conceptions of literacy have changed markedly. While literacy in the past was conceived of primarily as a set of decoding "skills" or cognitive strategies, literacy has increasingly been defined as constituted by social or cultural practices. During the 1980s, models of reading comprehension that assumed "correct" comprehension of meaning were questioned by theorists who now posit that text meaning derives from a transaction between the reader and the text in a particular social context. Similarly, critics charged that traditional, formalistic textbook models of composing, as well as "composing process" and "cognitive-processing" models of composing, failed to capture the writers' own motives, perceptions, needs, and knowledge within social contexts. For example, students may employ the various stages of the composing process, but without any clear sense of their social purpose for writing (Applebee, 1984). Or students are often taught specific comprehension strategies such as the "SQ3R" approach for reviewing texts, even though in real-world contexts, readers use a multitude of interconnected strategies rather than isolated strategies (Pressley, El-Diany, & Brown, 1990). All of this represents an increasing concern with understanding how we understand and produce texts within real-world contexts.

These shifts largely reflect the application of alternative disciplinary perspectives in literacy research: sociolinguistics, social psychology, cultural anthropology, sociology, poststructuralist criticism, and "critical theory." Many of these newer disciplinary perspectives embrace a "social constructivist" orientation toward literacy—that the meaning of literacy events and texts in those events are constructed by participants through their social interaction (Bruffee, 1986; Rorty, 1982).

Adopting a constructivist orientation entails a shift in attitude toward knowledge and ways of knowing through reading and writing. In the traditional conception of knowledge, knowledge exists independently of the knower as static, unchanging "facts" or "cognitions," what Fitzgerald (1990, 1991) defines as a "factualist" orientation. Readers and writers, therefore, must acquire or "unearth" knowledge as being "out" in the world by using the "correct," "objective," "scientific" methods. In contrast, from a social constructivist orientation, knowledge is created through transactions with texts (Rosenblatt, 1978) or through sharing of writing with others (Nystrand, 1990). Because knowledge is not fixed or objective, readers and writers are collaboratively constructing and revising knowledge to suit their own purposes. Rather than conceive of literature as a "body of knowledge" to be mastered, readers may come to literature as a way of experiencing and knowing. In order to understand how readers and writers construct knowledge, researchers need to study how readers and writers learn to adopt different stances or ways of knowing as constituted by social and cultural forces.

In broadening the conception of literacy during the 1980s, literacy theorists and researchers also questioned the politically appealing conception of "cultural literacy," as contained in a static, culturally exclusive canonical knowledge. This conception of literacy provides simple answers to a complex problem by resorting to the same simplistic measures or tests that drive many literacy curriculums. As Mike Rose notes in his book *Lives on the Boundary* (1989):

> To understand the nature and development of literacy we need to consider the social context in which it occurs—the political, economic, and cultural forces that encourage or inhibit it. The canonical orientation discourages deep analysis of the way these forces may be affecting performance. The canonists ask that schools transmit a coherent traditional knowledge to an ever-changing, frequently uprooted community. . . . Instead of analysis of the complex web of causes of poor performance, we are offered a faith in the unifying power of a body of knowledge, whose infusion will bring the rich and the poor, the longtime disaffected and the uprooted newcomers into cultural unanimity. If this vision is democratic, it is simplistically so, reductive, not an invitation for people truly to engage each other at the point where cultures and classes intersect. (p. 237)

In moving beyond the technocratic and "cultural literacy" perspectives that ignore the dynamic, evolving nature of institutions, literacy researchers have recognized that institutions are constituted by literacy practices. They therefore attempt to understand how persons use literacy practices to create viable communities—the family, peer group, classroom, workplace, or social group. For example, as Moll's research (this collection) indicates, the family provides extensive socialization in "funds of knowledge" necessary for success in the Hispanic community.

At the same time, the belief that "becoming literate" through schooling necessarily results in social or economic success has been challenged (Graff, 1987; Fingeret, 1990). Thus, some literacy theorists (McLaren, this collection) are focusing on the economic and political structure itself as fostering or impeding literacy development. For example, "skill and drill" literacy instruction often serves as a gatekeeping function for "lower track" or "nonacademic" students, who are already marked by class or ethnic differences as "deviant" (Barnes, Barnes, & Clarke, 1984; Eckert, 1989).

Thus, rather than conceiving of literacy as simply a necessary means to entering the workforce, literacy has been defined as entailing development of critical thinking and self-efficacy (Venezky, Wagner, & Ciliberti, 1990). While instruction in "correct" grammar and usage was justified as necessary for acquiring employment and/or middle-class status, active discussion in the classroom, without constraints of "being correct," may now be seen as itself fostering thinking and social development. In order to understand literacy as a means of development rather than an end to be achieved, researchers need to study the *quality* of literacy events as serving to foster growth and development.

And, the poststructuralist perspective posits the need to study literacy practices as representations by institutional practices. How a disease such as AIDS, for example, is represented by conservatives as a *sexual* disease equated with sin and death, is an institutional representation (Treichler, 1987). This entails studying the ways in which the language system itself serves to represent meanings. As Mary Poovey (1990) notes:

> Whereas humanists want to investigate origins, stability, truth, identity, mimesis, and the rational subject, poststructuralists focus on representation: language as a system of relations, the instability of meaning, the artificiality of truth, the contradictory nature of identity, the generative capacity of language, and the de-centered subject. (p. 620)

These and other shifts in conceptions of literacy have resulted in a shift in the kinds of methodological approaches employed. In order to study the processes of constructing knowledge or the development of thinking strategies through literacy, researchers have employed ethnographical, observational, and descriptive methods. Many of the experimentalist approaches employed in previous literacy research, which attempt to "control" for factors shaping literacy events, have been seen as artificially constraining the ways in which readers and writers construct knowledge. Moreover, the positivist assumptions shaping that research reflect a "factualist" rather than constructivist orientation (Fitzgerald, 1991). The question remains as to which of these approaches, or some combination of these approaches, provides a valid understanding of literacy.

Reasons for Changes in Literacy Research

There are a number of reasons for these shifts in conceptions of literacy and research methodology.

Changing Teaching Methods

In the past, teaching methods and educational research focused on the teacher from a "factualist" perspective, as a "truth-teller" employing a "knowledge-transmission" approach; research that was often problematic given the range of students' attitudes, abilities, and ways of learning. Now that classroom instruction has shifted to focusing more on the teacher as facilitator and the students as actively engaged in collaborative learning, researchers have focused their attention more on classroom interaction, noting, for example, the kinds of intertextual links students make between seemingly disparate experiences (Short, 1986). In order to understand the complexities and the often equally problematic nature of social interactions associated with literacy learning, during the 1980s literacy researchers relied increasingly on observational, ethnographical methodology, methods traditionally employed in anthropological research. Understanding how members of institutions acquire literacy practices requires an analysis of actual literacy "events." In the past, linguistic or pragmatic analysis of these practices focused on participants' uses of general rules or conventions. However, theorists have more recently argued for the need to focus on specific language events representing particular social arrangements. Nystrand (1990) contrasts the focus on rules and conventions as a "symbolic interactionalist" approach, as distinct from a "social interactionalist" perspective that focuses on specific language events, what Bloome and Bailey (this collection) define as "particularism."

Research on literacy use in different institutions (Erickson, 1984; Heath, 1983; Scribner & Cole, 1981) illuminated the complex relationships between literacy use and institutions, indicating, for example, that different institutions value different practices. Thus, rather than assume that literacy learning was a matter of individual initiative and motivation, a conception that often serves to blame the victim, literacy learning was recognized as a set of institutional practices. Understanding how these institutional practices and the "discourses" (Foucault, 1980; Brodkey, this collection) shape these practices requires a multidisciplinary perspective.

Increasingly Diverse Student Population

The students of the 1980s represented an increasingly diverse student population from a wide range of ethnic and social groups. Moreover, because a higher percentage of children and adolescents were considered poor in the 1980s than in the past, schools have had to cope with the many challenges associated with poverty. For example, a recent report issued by the American Medical Association and the National Association of State Boards of Education (National Association of State Boards of Education, 1990) indicated that approximately 10 percent of male adolescents and 18 percent of female adolescents suffer serious social and emotional problems, resulting in marked increases in antisocial behavior, poor school performance, dropout rates, pregnancy rates, suicide and crime rates, use of chemicals, and reported cases of depression. The report attributes some of these problems to an increasingly neglectful family environment, a decline of neighborhood cohesiveness, and the schools. For example, 55 percent of adolescents in single-parent households live at the poverty level. Forty to 50 percent of African American adolescents are unemployed. All of this serves to lower students' expectations for a positive future.

If adolescents, particularly poorer adolescents, perceive themselves as doomed to failure, they will not respond positively to schooling no matter how innovative or reform-minded. In some cases, alienated adolescents from working-class backgrounds perceive schools as representing the very middle-class institutional structures that have politically and economically marginalized them (Eckert, 1989).

Given an increasingly diverse student population, researchers have recognized the need to study literacy development not only in schools but also in a range of other institutions—the family, peer groups, health and social service agencies, neighborhood and religious groups—that may or may not be fostering literacy development. And researchers have had to question their own, often middle-class, normative assumptions about the value of certain literacy practices, recognizing, for example, that story sharing in a home may be equally important as being read to. Understanding the relationships between learning in a range of different contexts requires a blend of disciplinary perspectives.

Being Literate in an "Information Age"

While much attention has been devoted to "becoming" literate, "being" literate in an information age requires the ability to not only understand texts, but also to use texts to construct and convey knowledge. For example, while persons can acquire extensive information from computer data banks, newspapers, or cable television, unless they know how to use that information to construct knowledge, they may ironically have difficulty understanding and functioning in their world. Thus, literacy researchers have focused on the ways in which people learn to actively use information to fulfill their own purposes.

Adopting a Multidisciplinary Perspective

One common thread running through these social and cultural developments in the 1980s is the idea of literacy being shaped by a range of institutional forces—the school, family, workplace, peer group, or media. In order to understand these institutional forces, researchers from a range of different disciplinary perspectives in addition to linguistics and rhetoric—cognitive and social psychology, anthropology, speech communications, sociology, literary criticism, economics, and history—have focused their attention on literacy. (For the purpose of this collection, we use the concept "disciplinary perspective" to refer to a particular orientation or approach within a discipline. For example, literary criticism embraces a host of different, often competing disciplinary perspectives—New Criticism, Marxist, feminist, psychoanalytic, deconstructivist, poststructionalist, etc.

Thus, in studying literacy learning, researchers are applying a range of different perspectives. For example, in Pamela Eckert's (1989) two-year ethnographical study of "jocks" and "burnouts" in a suburban Detroit high school, she drew on cultural anthropology and sociological perspectives to analyze these two groups' behaviors in the high school and in their home neighborhoods. She also drew on sociolinguistics to analyze syntactic features of students' speech patterns as marking their different social identities. And, she employed economic theory to discuss the influence of class differences on the students' behaviors. None of these perspectives is clearly distinct from the other. By blending these different perspectives, she achieved far richer insights than if she had only adopted one.

Adopting a multidisciplinary perspective on literacy research requires an open dialogue between a range of perspectives. The conference and this volume represent an attempt to open up this dialogue. In order to represent a range of different disciplinary perspectives, we invited literacy researchers who adopt one or more of the perspectives of sociolinguistics, cultural ethnography, cognitive psychology, reader-response theory, and "critical theory"/poststructuralist theory. Sociolinguistics, cultural ethnography, and reader-response theory seem to be particularly relevant to understanding the shift to a social constructivist orientation. We included cognitive psychological perspectives, given their continued relevance to reading and writing research. And given their current influence on literature, composition, cultural studies, history, educational theory, and other areas, we believed it important to include the perspectives of "critical theory"/poststructuralist criticism.

There are certainly other disciplinary perspectives relevant to literacy research—history, speech communications, mass communications, developmental psychology, rhetoric, sociology, and a wide range of specific literary/critical theories. Although we wanted to include a broad sampling of different perspectives, we could not accommodate all of the relevant disciplinary perspectives in a weekend conference or a single volume.

We asked representatives of these different perspectives to discuss their own research and the theoretical perspectives and assumptions underlying it. We did not expect any of these representatives to entertain or embrace a multidisciplinary perspective. Rather, by juxtaposing these different perspectives, we hoped that the sum would be greater than the separate parts, that conference participants and readers of this volume would consider the ways in which they might synthesize these different perspectives. To nudge along this synthesis, we have included our own more general papers—plus one from George Hillocks, Jr., who represents the NCTE Assembly on Research, a conference co-sponsor—that address issues associated with adopting a multidisciplinary perspective. We also asked a group of reactors to try to synthesize some common themes running across the different perspectives.

Difficulties in Adopting a Multidisciplinary Perspective

In bringing together representatives of these different disciplines to talk with each other in one room, we knew that we were asking for trouble. We knew that, given radically different assumptions about literacy, there would be disagreements and dissonance even though different disciplinary perspectives may share a common interest; achieving any easy synthesis across disciplines would be difficult.

For example, cognitive psychological (Graesser, Magliano, & Tidwell, this collection) and cultural ethnographical (Moll, this collection) perspectives may both examine how people organize their knowledge of the world. However, achieving any synthesis between these perspectives is difficult because they presuppose different methodological approaches. Cognitive psychologists often prefer controlled experiments (see Hayes; Graesser, Magliano, & Tidwell, both in this collection), while sociolinguists or cultural ethnographers often prefer ethnographical observations (see Heap; Cook-Gumperz & Gumperz; Bloome & Bailey; Moll). This latter approach assumes that the meaning of literacy events could only be understood by studying these events as they occur in authentic settings, rather than as "controlled" in an experiment. And it assumes that quantitative analysis of literacy practices strips away the rich meanings available from observational analysis.

However, while there is a strong tradition of ethnographical work in the natural sciences and cultural anthropology, the specific methodological implications for literacy research are still being formulated. Little, for example, has been done on developing a methodology for understanding how participants' perceptions of the history of a literacy event shape their literacy practices in that event (see Bloome & Bailey, this collection).

The rise of ethnographical research has also touched off sharp, often divisive, debates between "qualitative" and "quantitative" researchers representing different disciplines. While some argue that these methods are ultimately irreconcilable (Heap, this collection), others have argued that these two approaches can be combined (Flower, 1989; Gage, 1989; Hillocks, this collection); still others suggest that the debate rests on false distinctions (Bloome & Bailey, this collection). Although these debates often generated more heat than light, they did call increasing attention to considering the assumptions underlying research methodologies (Green, this collection).

Another difficulty with achieving a multidisciplinary perspective in research is that research methods often lag behind theoretical developments. While literacy researchers continually evoke a "social constructivist" theory, the specific methodological implications of that theory for research remain ill-defined. And, despite the increasing popularity of poststructuralist theories of discourse and representation, there has been little application of such theory to systematic observational research. Different theoretical assumptions entail different methodological approaches. Whether these differences are reconcilable is the challenge facing literacy researchers in the future.

The Organization of This Volume

This volume is organized into three basic sections: difficulties in adopting a multidisciplinary approach, disciplinary perspectives and methodological approaches to literacy research, and specific disciplinary perspectives on literacy research.

Difficulties in Adopting a Multidisciplinary Approach

The three papers in this first section deal with some of the difficulties involved with adopting a multidisciplinary approach. These chapters address the debates between the qualitative versus quantitative, ethnographical versus experimental, "realist" versus "idealist"/social constructivist approaches. These debates often revolve around concern with the researcher's role or perspective. The "realists" posit that researchers cannot simply rely upon their own subjective perceptions of "reality." They argue that researchers need to rely on more systematic, verifiable observations or measures in order to achieve "validity." The "idealists," reflecting a social constructivist perspective, argue that the meaning of literacy events can only be understood by capturing participants' perspectives of that event.

In her paper, Judith Green argues in favor of adopting a multidisciplinary approach, noting that single disciplinary perspectives are inadequate for understanding literacy. Because different perspectives apply their own unique lens to literacy phenomena, each with their own language, assumptions, and approaches, Green argues that researchers need to clearly define their conceptions and to make explicit their assumptions. She then notes the ways in which her own research experience in studying classrooms in different cultures contributed to the development of her own perspective.

James Heap argues that the differences in the methodological approaches of natural science, social science, and cultural science rest on quite different assumptions, interests, and traditions. In order to make the case that these sciences are incompatible, he discusses his own work in ethnomethodology as a cultural science that involves distinctly different methods from those employed in natural or social science, particularly empirical sociology. In contrast to Green, Heap argues against the possibility of combining disciplinary perspectives. In order to make the case that these methodologies are incompatible, he discusses his own methods of ethnomethodology as quite distinct from the assumptions of positivist, empiricist, and experimentalist approaches.

In his paper, George Hillocks, Jr., summarizes the "realist" and "idealist" orientations. Unlike Heap, he believes that the realist and idealist orientations can be reconciled. He argues that casting these two positions as opposing, either-or perspectives oversimplifies the debate, noting that each position can serve to illuminate the other. While these three papers may never resolve the differences between the realist and idealist orientations in educational research, Green and Hillocks point the way to a possible reconciliation.

Disciplinary Perspectives and Methodological Approaches

The second section examines the relationship between disciplinary perspectives and methodological approaches to literacy research. The papers in this section discuss how adopting a disciplinary perspective entails certain appropriate methodological approaches for studying literacy.

To illustrate the relationship between perspectives and methodology, we begin this section with a narrative. In their paper, Russell Hunt and Douglas Vipond recount their experience in attempting to understand the phenomenon of "point-driven" reading. They contrast three different orientations involved in responding to texts: "information-driven" (reading for facts), "story-driven" (reading for enjoyment), and "point-driven" (reading for the point). Rather than defining the "point" simply in terms of the gist or moral, they posit that the point derives, as in a conversation, from the social interplay between reader, text, and context. After conducting a series of experimental studies and sensing that they still did not understand point-driven reading, they adopted a more descriptive methodology which allowed them to examine literary responses within "authentic" contexts with actual texts. Their story illustrates the way in which perspectives are related to alternative methodologies. Recognizing the need to adopt a more social constructivist perspective on literary response, Hunt and Vipond employed a different methodology that yielded more insightful results than did their previous studies.

In his paper, Richard Beach discusses four stances researchers may adopt in conducting literacy research: the textual, social, cultural, and field/disciplinary. By "stance" he means adopting a focus on certain aspects of literacy—"textual" focuses on textual forms, "social" on the social transaction between participants in a literacy event, "cultural" on the cultural norms shaping an event, and "field/disciplinary" on the particular ways of thinking unique to a field or discipline. While each of these stances serves to illuminate a particular facet of a literacy event, adopting more than one of these stances provides a more complete understanding of literacy events.

Timothy Shanahan in his essay suggests that our perspectives determine how meaningfully our findings or results can be synthesized into a more complete understanding of literacy. Each perspective's assumptions and belief systems control the extent to which researchers can move back and forth between methods. He poses questions researchers must answer if they are to grasp the full implications and meaning of their own perspective, illustrating this process by exploring his own research on children's authorship.

To illustrate the relationship between perspectives and research methods, John Hayes discusses his personal evolution from a behavioral to a cognitive psychological perspective. He discusses the fact that a behavioral perspective failed to explain the complexities of literacy learning. As a cognitive psychologist interested in composition research, he examined writers' use of cognitive processes, such as goal-setting, as shaped by their perceptions of the rhetorical situation. The fact that Hayes devotes part of his paper to a discussion of motivation, a concept dismissed by behaviorists as not an "observable behavior," reflects the extent of his change.

In attempting to apply a disciplinary perspective, researchers ultimately need to evaluate the theoretical validity of that perspective, asking the question, "does this theory provide a valid explanation of a certain literacy phenomenon." In his essay, Michael Kamil raises further questions about the components that constitute a disciplinary or theoretical perspective. He also defines some evaluative criteria for assessing a perspective.

Specific Disciplinary Perspectives on Literacy Research

The third section represents a range of specific disciplinary perspectives on literacy research. Each of these papers discusses how a particular perspective informs literacy research.

In their paper, Jenny Cook-Gumperz and John Gumperz trace the historical development of linguistics as applied to literacy research, noting the limitations of the linguistic perspectives of previous decades. They argue that speech-act theory and sociolinguistics yield valuable insights into social language use in classrooms. Their historical overview, charting an increased interest in social contexts, serves to frame three other papers in this section, which adopt a social constructivist or social interactionalist perspective.

Drawing on these perspectives, David Bloome and Francis Bailey propose a model of understanding language use in literacy "events" as constituted by participants' motives, perceptions, prior experiences, roles, and status. They demonstrate their analysis of events by analyzing the "particulars" involved in intertextual references to previous events or experiences. In sharp contrast to analysis of linguistic phenomenon without reference to specific contexts, their model of language use in events provides a useful taxonomy for researchers to study everyday social interaction in classrooms, the family, peer groups, or the workplace.

As an example of analyzing literacy use in one of these contexts, the family, Luis Moll summarizes his research on the literacy uses in Hispanic homes. Representing cultural anthropological/ethnographical research perspectives, he examines the ways in which Hispanic families develop elaborate "funds of knowledge" necessary for daily life. He then examines the students' social uses of reading and writing in classrooms, noting the ways in which schools do or do not successfully exploit students' "funds of knowledge" developed in the home.

Representing a cognitive psychological/computer science perspective, Arthur Graesser, John Magliano, and Paula Tidwell summarize their research on readers' prior knowledge and comprehension. Using controlled experiments and computer models, they test different theories of readers' application of "world knowledge" in understanding words and short texts. They also examine computer models of question-asking designed to explore different aspects of a phenomenon.

Representing the perspective of reader-response theory meshed with a social contructivist perspective, Joanne Golden applies Wolfgang Iser's model of response strategies to an analysis of elementary school students' discussions of literary text. While Iser's taxonomy of response strategies serves to illuminate children's processes of responding to text, Golden argues that understanding the dynamics of literary responses in classroom discussions requires a social perspective lacking in his theory. Her recognition of the value of the social, as does Hunt and Vipond's, reflects a shift in response research toward understanding response as a social act.

Literacy practices also reflect the ideological interest of certain institutions. Thus, institutional socialization includes not only learning discourse strategies, but also learning to adhere to an institution's shared ideological perspective. "Critical theory" advocates argue that much of American schooling serves to perpetuate the power of existing institutional control and conservative political perspectives. Because literacy researchers need to consider the relationship between literacy and ideology, we have included two representatives of a "critical theory" perspective.

Drawing on current poststructuralist theory and feminist criticism, Linda Brodkey examines literacy practices as reflecting cultural and ideological socialization. On the basis of Foucault's work, Brodkey argues that much of literacy research rests on the myth of the "individual" reader or writer, when, in fact, readers and writers are constituted by various "discourses" shaping their perspectives. Rather than perceiving meaning as emanating simply from a "transaction" between reader and text, Brodkey perceives meaning as constituted by larger cultural and institutional forces. She also argues that researchers need to examine the ways in which institutions often limit students' potential to acquire a "critical literacy."

In his paper, Peter McLaren summarizes "critical theory" analysis of literacy learning in schools. He describes the often exclusionary functions of literacy instruction in schools as serving to perpetuate limited versions of reality, shaping students' behaviors and outlook. Standing back from a poststructuralist perspective, he examines some of the limitations of that perspective, particularly in terms of a feminist perspective.

Reaction Papers

We also invited a number of reactors to respond to the papers. These reactors are engaged in a range of different research interests. Diane Stephens, Center for the Study of Reading, and David Pearson, dean of the College of Education, both at the University of Illinois at Urbana–Champaign, themselves represent different research perspectives on reading research. Susan Hynds, associate professor of English education at Syracuse University, has done extensive work on cognitive complexity and literary response. Robert Gundlach, professor of linguistics and head of the Composition Program at Northwestern University, has examined the ways in which writing reflects social and developmental needs. Marjorie Siegel, associate professor of education at the University of Rochester, has done work in learning processes in writing, particularly in mathematics. Ann Matsuhashi Feldman, professor of English and head of the writing lab at the University of Illinois at Chicago, has studied variation in "on-line" composing processes as well as the effects of peer-tutoring in writing labs.

These reactors were asked to discuss the question, "What did I learn from this conference?" In some cases, the reactors summarized the themes and implications for research represented in the papers. In other cases, they applied some of the perspectives to their own work. None of them found any myopic, easy synthesis of the quite different disciplinary perspectives.

In closing, we wish to express our gratitude to the Executive Committee of the National Conference on Research in English for their financial support of this conference and book. We enjoyed working with our cosponsor for the conference, the NCTE Assembly on Research. We want to thank Linda Gambrell, chair of the NCRE Publications Committee, for organizing the external review of these papers. And we much appreciate the responses and suggestions of our three reviewers, Avon Crismore, Carole Edelsky, and Jill Fitzgerald.

References

Applebee, A. (1984). *Contexts for learning to write*. Norwood, NJ: Ablex.

Barnes, D., Barnes, D., & Clarke, S. (1984). *Versions of English*. London: Heinemann.

Beach, R., & Pearson, P. D. (Eds.). (1977). *Perspectives on literacy.* Urbana, IL: National Council of Teachers of English.

Bruffee, K. (1986). Social construction, language, and the authority of knowledge: A bibliographical essay. *College English, 48,* 773–790.

Eckert, P. (1989). *Jocks and burnouts: Social categories and identity in the high school.* New York: Teachers College Press.

Erickson, R. (1984). School literacy, reasoning, and civility: An anthropologist's perspective. *Review of Educational Research, 54,* 525–546.

Fingeret, A. (1990). Literacy for what purpose? A response. In R. Venezky, D. Wagner, & B. Ciliberti (Eds.), *Toward defining literacy* (pp. 35–39). Newark, DE: International Reading Association.

Fitzgerald, J. (1990). Reading and writing as "mind meeting." In T. Shanahan (Ed.), *Reading and writing together: New perspectives for the classroom* (pp. 81–97). Norwood, MA: Christopher-Gordon.

Fitzgerald, J. (1991). *Towards knowledge in writing: Illustrations from revision students.* New York: Springer-Verlag.

Flower, L. (1989). Cognition, context, and theory building. *College Composition and Communication, 40,* 282–311.

Foucault, M. (1980). *Power/knowledge: Selected interviews and other writings, 1972–1977.* C. Gordon (Ed.). New York: Random House.

Gage, N. L. (1989). The paradigm wars and their aftermath: A "historical" sketch of research on teaching since 1989. *Educational Researcher, 18* (7), 4–10.

Graff, H. (1987). *The legacies of literacy.* Bloomington: Indiana University Press.

Heath, S. (1983). *Ways with words.* New York: Cambridge University Press.

National Association of State Boards of Education. (1990). *Code blue: Report on the status of youth in America.* Washington, DC: Author.

Nystrand, M. (1990). Sharing words: The effects of reading on developing writers. *Written Communication, 7,* 3–24.

Poovey, M. (1990). Cultural criticism: Past and present. *College English, 52,* 615–625.

Pressley, M., El-Diany, P., & Brown, R. (1990). Is good reading possible? Unpublished manuscript, University of Maryland, College Park.

Rorty, R. (1982). *Consequences of pragmatism.* Sussex, England: Harvester Press.

Rose, M. (1989). *Lives on the boundary.* New York: Free Press.

Rosenblatt, L. M. (1978). *The reader, the text, the poem: The transactional theory of the literary work.* Carbondale: Southern Illinois University Press.

Scribner, S., & Cole, M. (1981). *The psychology of literacy.* Cambridge, MA: Harvard University Press.

Short, K. (1986). Literacy as a collaborative experience: The role of intertextuality. In J. A. Niles & R. V. Lalik (Eds.), *Solving problems in literacy* (pp. 227–232). Rochester, NY: National Reading Conference.

Treichler, P. (1987). AIDS, homophobia, and biomedical discourse: An epidemic of signification. *Cultural Studies, 1,* 263–305.

Venezky, R., Wagner, D., & Ciliberti, B. (Eds.). (1990). *Toward defining literacy.* Newark, DE: International Reading Association.

I Difficulties in Adopting a Multidisciplinary Approach

2 Multiple Perspectives: Issues and Directions

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As the 1990s begin, researchers concerned with studying the English language arts are in a unique position. More than at any other time, they have available a diverse set of research perspectives to frame their explorations of the processes, products, and societal aspects of the English language arts. The existence of multiple perspectives is both a potential boon and problem. Multiple perspectives can be viewed as a boon in that researchers can select from a wide variety of options the one or ones that provide new insights into the phenomenon of interest (e.g., language learning, early literacy, literacy, comprehension, instruction, reading, response to literature, writing).

This boon, however, may also pose problems, since many perspectives use similar concepts, terms, and techniques (e.g., field methods) but have differing assumptions about the world and how it works, although they appear similar on the surface (Green & Collins, 1990). Not all perspectives, therefore, are compatible. To avoid the potential problems, to select appropriate perspectives, and to choose among more-or-less adequate theories, researchers must consider the following questions: On what basis can one perspective be selected over another? What are the consequences of the choice(s)? Must one perspective be selected? Will one perspective suffice, or are multiple perspectives needed to accomplish the purpose of the research (e.g., describe, explain, identify, determine, explore)?

The purpose of this paper is to examine the factors involved in exploring options and developing multiple perspective approaches to the study of educational processes, institutions, and phenomena. The discussion will draw on two bodies of work: studies that have used multiple research perspectives to study English language arts, and a recent study of life in classrooms in Brazil. The former studies make visible factors involved in selecting and combining research perspectives. The latter raises questions about how a perspective and its attendant methodology make visible particular aspects of a phenomenon while leaving other, often essential, aspects unexamined.

Selecting among Multiple Perspectives

Central to the discussion of multiple perspectives is the assumption that any perspective is a lens through which a researcher examines a phenomenon. The lens is selective and does not capture the totality of the phenomenon (Evertson & Green, 1986). A perspective enables the researcher to deliberately select a focus, to define the nature and boundaries of the phenomenon, to pose specific questions, and to design ways of studying the phenomenon. Different perspectives provide different lenses through which to view the phenomenon. From this viewpoint, no single perspective is seen as adequate to capture, describe, or explicate all aspects of the phenomenon (Green & Harker, 1988).

Figure 1 presents a visual metaphor that will be used to explicate this way of viewing the relationship of phenomenon to perspective. The iceberg in Figure 1 represents a phenomenon that is of interest to the researcher. The tip of the iceberg represents findings that comprise our "current knowledge." As indicated, however, many aspects of the phenomenon are still to be explored and are invisible at the current time. One aspect of research that is often invisible is the relationship of the perspective to the phenomenon. As shown in Figure 1, each perspective "illuminates" specific aspects of the phenomenon and not the whole, and each contributes particular findings to the body of current knowledge. Thus, to understand what we can and do know, we must better understand the relationship between a perspective (theory and method) and the findings it generates. By exploring this relationship, we are also better able to determine whether the lens used permits us to explore the phenomenon (i.e., an iceberg or part of an iceberg) or whether what we see is actually some other phenomenon (e.g., an object on the iceberg).

The selective nature of perspectives can be illustrated by two types of research studies. The first type is an exploration and synthesis of a single phenomenon (communicative competence) across four disciplines: anthropology/ethnography of communication, child language/psycholinguistics, social psychology, and sociology (Wallat & Piazza, 1988). The second type involves research in which the same phenomenon was deliberately explored using different theoretical perspectives. One set of studies that will be reported explored language arts lessons

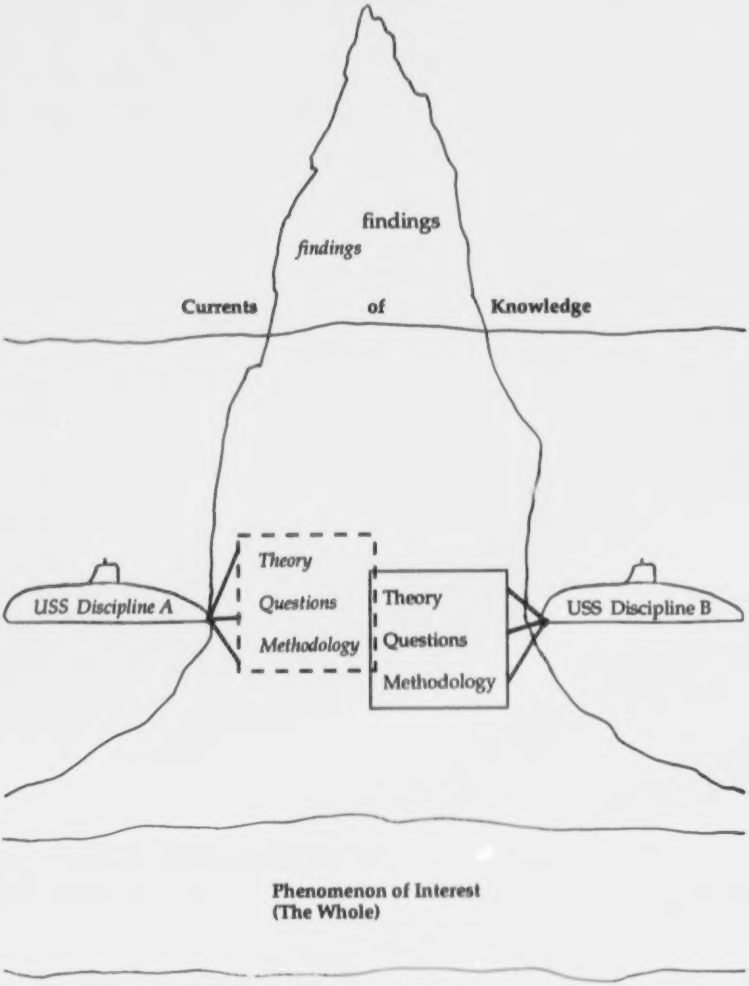
findings
findings
Currents of Knowledge
Theory
Questions
Methodology
Theory
Questions
Methodology
USS Discipline A
USS Discipline B
Phenomenon of Interest
(The Whole)

Fig. 1. Illustrating the selectivity of perspectives

using different perspectives *within a discipline* (sociolinguistics) (Morine-Dershimer 1988a, 1988b; Ramirez, 1988; Shuy, 1988; Tenenberg, 1988). A second set explored storyreading-discussion using perspectives *across disciplines* (text linguistics/literary theory, sociolinguistics, and semantic analysis/text linguistics) (Golden, 1988; Green, Weade, & Graham, 1988; Harker, 1988). These four studies provide a basis for the exploration of the relationship of perspective and findings and the nature of the research process as a process of selectivity.

Locating Selectivity: Identifying Factors that Distinguish among Perspectives

Wallat and Piazza (1988) located four disciplines within which studies of communicative competence had been undertaken—anthropology/ethnography of communication, child language/psycholinguistics, social psychology, and sociology. To understand the findings on communicative competence across the disciplines, they had to consider the areas of interest to each discipline and the questions that were derived from these interests and varying research approaches. A representative set of findings are presented in Table 1 (see p. 24).

What becomes evident as each perspective is considered is that the purpose for studying communicative competence differs by discipline. Thus, while each discipline may contribute to what we know about communicative competence, these findings cannot be merely aggregated. What Wallat and Piazza (1988) demonstrate is that to understand findings, we must first understand the perspective that generated the findings and the purposes for which the study was undertaken. They argue that the different disciplines each contribute particular images of children which can build a more holistic and rounded portrait of the competence of a child.

The difference becomes important in that it makes visible multiple views of children's competence. For example, they identified ten images of children and youth related to communicative competence: child as persuader (Cook-Gumperz, 1982), as adapter (Corsaro, 1981), as spontaneous apprentice (Miller, 1977), as craftsman (Felden, 1976), as social participant (Philips, 1972), as practical reasoner (Cook-Gumperz, 1975), as style shifter (Tannen, 1984), as ethnographer (Mishler, 1972, 1979), as problem solver (Parke, 1976), and as attention holder (Sacks, 1972).

The problem of exploring perspectives so that data can be used across perspectives to develop broader understandings of phenomena is complex, yet possible, as Wallat and Piazza (1988) have shown. They suggest that to "read" in a new discipline requires an understanding of a variety of factors, including: the *language* of the discipline, the *views of the world* associated with the various perspectives (e.g., existence of multiple realities versus a single, fixed reality; knowledge as within the head of the individual versus knowledge as socially constructed), *norms and expectations for presentation of evidence*, and the *research approaches* used to generate knowledge. In other words, those seeking to work or read across perspectives must become multilingual and in some instances multicultural beings, or at least second-language learners.

The complexity of the task of synthesizing across perspectives became evident when I was asked to synthesize ten studies funded by the National Institute of Education (Green, 1983). I was given access to all proposals, reports, and support documents. In addition, I was asked to visit the researchers and to interview members of the research teams to obtain information before it was published. As my graduate assistants and I attempted to synthesize the ten studies identified by NIE, it became evident that there was only a 25 percent overlap in terminology. That is, on the surface these studies "sounded" and "looked" as if they were studying different phenomena. Yet, when the concepts that the words represented were considered, the overlap across studies and perspectives (e.g., cognitive anthropology, child development, sociolinguistics, ethnography of communication, social psychology) was extensive.

To determine the accuracy of the constructs and to understand how the authors were using these constructs, I conducted a series of interviews with each team. In other words, the perspective of the researcher (the emic or insider's perspective) was considered in determining which constructs were held in common across the studies and which authors adhered to the common definition. When I reported the findings from this synthesis effort, only the studies in which the author(s) agreed with the definition of the construct were included. When authors did not agree to the definition, the study was not listed as utilizing the construct. Table 2 (see pp. 26–27) represents a summary of this information.

The constructs presented in Table 2 provide a framework for exploring teaching and learning as linguistic, or rather, communicative processes in classroom settings (cultural contexts) (e.g., Cazden, 1986). This analysis suggests that one way to interpret the findings is that there is no *common language* across perspectives, that each perspective has its own language. This lack of common language makes synthesis and/or comparison of findings difficult. It also makes access to the constructs difficult for those not grounded in the discipline or perspective.

As indicated in Table 2, however, there was agreement across the constructs that defined a category (shown in italic print in Table 2).

Table 1
Summary of Comparison of Areas of Interest and Questions across Disciplines
(Wallat & Piazza, 1988)

Discipline/ Areas of Interest	Representative Questions
Anthropology (Ethnography of Communication) Language theory Language change Language as evidence of worldview	What are the linguistic varieties in use in a community? What is it about the performance of a message that makes it appropriate or effective? What broad patterns in the use of speech emerge from the analysis of the social dimensions of speaking throughout society?
Child Language/ Psycholinguistics Language acquisition Language development Speech acts	What is the relationship between language and thought? What is the role of social-interactional factors in language acquisition? What must language users know in order to understand and produce meaningful sentences?
Social Psychology Analysis of behavior as a function of both personality and situational variables (e.g., content of socialization) Processes of interactions in groups Analysis of social situations (e.g., development of taxonomies of situation)	What role does selective perception of information and/or cues play in the process of interaction in groups? How is it that some members of a group understand and agree at once on their mutual obligations, while others take a long time in reaching agreement, or do not come to terms with each other? How do children become members of society?

Table 1 (continued)

Sociology Social activities of individuals Social order Status, roles and relationships, values Common objectives, obligations	What are the institutional practices that constitute social organization? How do members produce and recognize social events? What part does language play in authority relations within institutional settings? In the stratification of talking arrangements? How does the structure of natural conversation reflect speakers' social knowledge? How does language make visible the social order? (i.e., How does language account for the production and maintenance of social order?)

Yet there was individual variability on each of the subconstructs. Thus, common as well as unique elements were identified. This work suggests that to build theory or accumulate knowledge, we must be able to compare and contrast perspectives, identify what each perspective permits us to see and what it masks, and understand the metaphors reflected in the language (Lakoff & Johnson, 1980). Only then will we be able to develop deeper understandings of the phenomena of interest to educational researchers, and to select among alternative and often competing sets of findings those that are appropriate.

These issues provide a basis for identifying factors that must be considered when selecting a perspective or in bringing perspectives together to develop more comprehensive understandings, or in choosing among competing perspectives. Two additional sets of studies will be presented to raise questions about how multiple perspectives can be used to explore different theoretical perspectives and their contributions. Two collaborative studies were undertaken to explore the value of different theoretical perspectives in describing and analyzing classroom events. In a collaborative study that brought perspectives from different disciplines together, Green, Harker, and Golden (1987) explored the same event. Green and her colleagues (Green, Weade, & Graham, 1988) analyzed the lesson from a sociolinguistic perspective, Golden from a text linguistic/literary theory perspective, and Harker from a text linguistic/propositional analysis perspective. The selection of these perspectives was deliberate, in that they shared a common perspective on knowledge as socially constructed (Green, Harker, & Golden, 1987).

Comparing the findings of these three interrelated studies demonstrated that there was a convergence across the studies in specific areas but unique contributions in other areas. What Green, Weade, and Graham (1988) found was that the social and instructional requirements of the two lessons being compared differed. In other words, the students did not engage in the same task even though the surface task appeared the same for the two lessons—to read and discuss a story with a group of students from the teacher's classroom. Golden (1988) found that the students in the two lessons did not hear the same story, and Harker (1988) found that the cognitive requirements of the two lessons differed.

The difference identified in these studies becomes significant when the two lessons selected for comparison were considered. In a previous study, Green (1978) had found that the two lessons could be distinguished when student recall of information was considered. The two

Table 2
Summary of Constructs Underlying 10 Studies of Teaching as a Linguistic Process in a Cultural Setting (Adapted from Green, 1983)

Constructs/Subconstructs	Number of Studies in which Construct Used
Contexts Are Constructed during Interactions	*10*
Activities have participation structures	5
Contextualization cues signal meaning	7
Rules for participation are implicit	8
Behavior expectations are constructed as part of interactions	8
Meaning Is Context-Specific	*10*
All instances of a behavior are not equal	10
Meaning is signaled verbally and nonverbally	10
Contexts constrain meaning	10
Meaning is determined by and extracted from observed sequences of behavior	10
Communicative competence is reflected in appropriate behavior	6

lessons led to different amounts of information recalled. Therefore, the findings of this study provide clarification about what difference the variance identified in the 1978 studies made.

Thus, this set of studies showed that no single perspective was sensitive enough or broad-based enough to capture the entire lesson or account for the differences in findings for the two lessons reported in the original study (Green, 1978). Rather, multiple perspectives were needed to provide a more complete portrait of the phenomena.

A similar argument was made by Morine-Dershimer and her colleagues (Morine-Dershimer, 1988a). Morine-Dershimer (1988a, 1988b), Ramirez (1988), Shuy (1988), and Tenenberg (1988) explored six language arts lessons using three different sociolinguistic perspectives—dimensions of classroom language (Shuy), speech acts (Ramirez), and questioning cycles (Tenenberg). The findings from these perspectives were compared and contrasted. As in the study by Green, Golden, and Harker, common and unique findings were identified. In this

Table 2 (continued)

Inferencing Is Required for Conversational Comprehension	*10*
Frames of reference guide participation of individuals	10
Frame clashes result from differences in perception	7
Communication is a rule-governed activity	8
Frames of reference are developed over time	8
Form and function in speech used in conversation do not always match	8
Classrooms Are Communicative Environments	*10*
Differentiation of roles exists between teachers and students; relationships are asymmetrical	10
Differential perceptions of events exist between teachers and students	7
Classrooms are differentiated communicative environments	5
Lessons are differentiated communicative environments	5
Communicative participation affects student achievement	7

study, however, some findings were contradictory. Morine-Dershimer (1988b) argued that when contradictory findings are identified, the researcher's task is not to choose one set of findings over the other but to reenter the data and use the conflict point to reconsider and reexamine the phenomenon. The conflict in findings then can lead to new understandings as well as to selection among alternative interpretations. The contrast, therefore, creates a point of tension that is productive and dynamic.

The four sets of multiple perspective work reported here suggest that we must consider how the lens (perspective) influences what can be and is known. This work also suggests that the traditions grounding each perspective, the purposes of researchers who traditionally use the perspective, the language associated with the perspective, and the view of the world entailed by the perspective must be understood if we are to maintain the integrity of the perspective (Green & Collins, 1990). To use a research tool from another discipline, therefore, involves more than using or applying the techniques or methodology. In other words, each methodology is framed by a particular set of assumptions that influence the actions of the researcher. Without such knowledge, researchers run the risk of misapplication, as well as criticism from the home discipline. (See, for example, the argument about blitzkrieg ethnography by Rist, 1980.)

Making the Familiar Strange: Reflecting on Research Perspective and Researcher as Instrument

To end this exploration of perspectives, I will use a recent study I undertook in Brazil. This part of the discussion will take the form of a "confessional tale" (Van Maanen, 1988). It will use a research study not to explain a set of findings, but to make visible issues in research and aspects of theory and research that are often invisible, and thus remain silent in the discussion of the products of our research. The purpose of this discussion is to reflect on the process and goals of research, and not merely to report or critique what occurred.

The study of life in Brazilian classrooms involved systematic observations in two Brazilian classrooms (first- and fourth-grade) over a period of three months. For the first month, two doctoral students, Brazilian colleagues, and I observed first and fourth grades for a two-week period. After the first month, the two students returned to the United States, and I continued the observations with the aid of Brazilian colleagues over two additional months. Fieldnotes, videotapes, and interviews of the teachers were undertaken to explore the possibility of engaging in interactive sociolinguistic (Gumperz, 1986) research in Brazilian classrooms. The Brazilian colleagues acted as translators and arranged entry in addition to participating in the data collection. This study, then, was exploratory and laid the foundation for future research.

Several aspects of the research process and the relationship between researcher, perspective, and procedures became evident. First, we had little or no trouble in constructing maps of time, space, activity, topic, and actors that the teachers verified later. In addition, patterns of interaction could be identified that indicated the general nature of teacher contact, the distribution of help, the social requirements for participation, the pedagogical strategies used by the teachers, and the general theoretical orientation of the teachers (e.g., Piaget, Ferreiro, and Freire). The teachers and administrators were surprised at the level of description of their program that was possible, especially in light of the fact that as a team we only partially understood the language of instruction (Portuguese). These educators verified the interpretation and analysis in one-to-one interviews as well as in group discussions.

The second discovery came from the fact that I could obtain clear pictures of the social and structural life in Brazilian classrooms, but I could not tell what was being learned. One of the factors contributing to my lack of understanding was my limited ability in Portuguese. At the time the study began, I spoke and comprehended little Portuguese (survival level). At the point that I exited the field, however, my Portuguese was sufficient to engage in an interview with a teacher who spoke limited English but comprehended the language. Thus, in the interview, I spoke English and she spoke Portuguese, and together we constructed a common language.

The lack of language facility was not sufficient, however, to account for the lack of knowledge about what was learned. What became evident was that while I was concerned with the construction of knowledge in classrooms, the perspective that I had selected allowed me to explore the social dimensions of living in classrooms (the norms and expectations, roles and relationships, and rights and obligations of everyday life) and the nature of activity (who did what with whom, under what conditions, when, where, with what observable outcome). It did not, however, provide the means to explore the content of events in a systematic way. This perspective focused more on the social use of language, the social demands of participation, and linguistic, social, and contextual factors that constrain access and/or participation. Thus, the perspective I selected provided a clear lens on particular aspects of classroom life and masked others.

Another way to consider this issue is as a type of "research ethnocentrism" and "cultural blindness." Anthropologists are currently struggling with this issue as they begin to do research in their own backyards. Anthropologists speak of the need to make the ordinary extraordinary and the invisible visible, and of becoming professional strangers (Agar, 1980; Dobbert, 1982; Spindler, 1982; Zaharlick & Green, 1991). The discussion within anthropology is how to make "cultural knowledge" visible when studying one's own culture and how to guard against ethnocentrism when studying other cultures (Heath, 1982). What became evident in Brazil is that while I was a stranger to the Brazilian culture, I was not a stranger to the culture of schooling (Fernie, Kantor, Klein, Elgas, & Meyer, 1988). That is, I entered the classroom assuming that I knew how to "see" a class. However, as I observed over time, I became aware that the classroom—the four walls of a room—was not the boundary of the class (the social group of people who affiliated over time between 1:30 and 5:30 every day). The entire school became the classroom, and class was a group of people. When I planned the videotaping and collection procedures, I had not considered how often the walls of the class might figuratively expand. Prior work had indicated that this might happen occasionally, but not daily or multiple times within a day. In addition, my observations were limited to two hours per day. I was unable to observe longer because of the teachers' and administrators' perception that longer periods would be too intrusive. Thus, the limited access influenced what I was able to see and understand about the totality of life within and across days.

What the Brazilian study made visible was the assumptions about the nature of classroom life, derived from past experience as an elementary teacher (ten years) as well as a researcher, that I and my colleagues brought to the study of life in Brazilian classrooms. I also found that the theories I used to study classroom life focused my attention on particular aspects and masked others, even when I intended to collect other information. Finally, the contrast between my assumptions based on American classroom life and the observed life in Brazilian classrooms led to new understandings of American classrooms and educational systems as well as about the research process itself. As a result, the Brazilian context challenged my theoretical, procedural, and personal knowledge and forced me to "make the familiar strange." It raised for me the need to move outside of my world so that I could reflect back on the world with new eyes, both professionally and personally. It also raised questions about how other perspectives might consider and/or fail to consider such issues.

A Closing: Issues and Directions Revisited

In this paper, factors involved in selecting a perspective were explored. A perspective was defined as a lens through which a researcher views the world. This lens was shown to be a selective one that orients the researcher to particular phenomena, questions, approaches, and interpretations. Issues involved in comparing findings were also explored. Central to this exploration was the need to understand the theoretical tradition grounding a perspective, the ethnocentrism that arises from adopting a single perspective, and the need for strategies to compare and contrast findings across perspectives.

As we move into this period of richness of perspective, we need to develop ways of remaining open to the phenomena of interest, and ways to explore the contributions of the various perspectives. To accomplish these tasks, we will need to explore ways of building a community dialogue that will frame new questions, provide a means of understanding current knowledge, and find ways of bringing new understandings from other disciplines to the forefront of our awareness. In other words, we must ensure that the familiar will become strange so that we can continue to examine and reexamine our ordinary actions and beliefs, as well as the questions, issues, and phenomena we study. From such dialogues and debates we may come to understand central issues facing education in new ways by making visible aspects of today's complex, multifaceted, multicultural world that are currently hidden from view.

References

Agar, M. (1980). *The professional stranger: An informal introduction to ethnography*. New York: Academic Press.

Cazden, C. (1986). In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 432–463). New York: Macmillan.

Cook-Gumperz, J. (1975). The child as practical reasoner. In B. Blount & M. Sanchez (Eds.), *Socio-cultural dimensions of language use* (pp. 137–162). New York: Academic Press.

Cook-Gumperz, J. (1982). *Final report on the school/home ethnography project* (NIE Grant No. G-78-0082), Berkeley: University of California, Language Behavior Research Laboratory.

Corsaro, W. (1981). Entering the child's world: Research strategies for field study and data collection. In J. Green & C. Wallat (Eds.), *Ethnography and language in educational settings* (pp. 117–146). Norwood, NJ: Ablex.

Dobbert, M. (1982). *Ethnographic research: Theory and application for modern schools and society*. New York: Praeger.

Evertson, C., & Green, J. (1986). Observation as inquiry and method. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 162–213). New York: Macmillan.

Felden, D. (1976). The child as craftsman. *Phi Delta Kappan, 58* (1), 143–149.

Fernie, D., Kantor, R., Klein, E., Elgas, P., & Meyer, C. (1988). Becoming ethnographers and becoming students in a preschool. *Journal of Childhood Research in Education, 3,* 122–146.

Golden, J. (1988). The construction of a literary text in a story-reading lesson. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 71–106). Norwood, NJ: Ablex.

Green, J. L. (1978). *Pedagogical style differences as related to comprehension performance: Grades one through three* (Doctoral dissertation, University of California, Berkeley, 1977). *Dissertation Abstracts International, 39,* 833A–834A.

Green, J. L. (1983). Research on teaching as a linguistic process: A state of the art. *Review of Research in Education, 10,* 151–252.

Green, J., & Collins, E., (1990). Challenges to qualitative: An overview. In M. J. McGee Brown (Ed.), *Qualitative research in education* (pp. 15–28). Proceedings of the third annual conference of the Qualitative Interest Group. Athens, Georgia: University of Georgia.

Green, J., & Harker, J. (Eds.). (1988). *Multiple perspective analyses of classroom discourse*. Norwood, NJ: Ablex.

Green, J., Harker, J., & Golden, J. (1987). Lesson construction: Differing views. In G. Noblit & W. Pink (Eds.), *Schooling in the social context* (pp. 46–77). Norwood, NJ: Ablex.

Green, J., Weade, R., & Graham, K. (1988). Lesson construction and student participation. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 11–18). Norwood, NJ: Ablex.

Gumperz, J. (1986). *Discourse strategies*. New York: Cambridge University Press.

Harker, J. (1988). Contrasting the content of two story-reading lessons: A propositional analysis. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 49–70). Norwood, NJ: Ablex.

Heath, S. (1982). Ethnography in education: Defining the essentials. In P. Gilmore & A. Glatthorn (Eds.), *Children in and out of school* (pp. 33–55). Washington, DC: Center for Applied Linguistics.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.

Miller, G. (1977). *Spontaneous apprentices: Children and language*. New York: Seabury.

Mishler, E. G., (1972). Implications of teacher strategies for language and cognition: Observations in first-grade classrooms. In C. B. Cazden, V. P.

John, & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 267–298). New York: Teachers College Press.

Mishler, E. G. (1979). "Wou' you trade cookies with the popcorn?" The talk of trades among six year olds. In O. K. Garnica & M. L. King (Eds.), *Language, children and society* (pp. 221–236). Oxford, England: Pergamon.

Morine-Dershimer, G. (1988a). Three approaches to sociolinguistic analysis: Introduction. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 107–112). Norwood, NJ: Ablex.

Morine-Dershimer, G. (1988b). Comparing systems: How do we know? In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 195–214). Norwood, NJ: Ablex.

Parke, R. D. (1976). Social cues, social control, and ecological validity. *Merrill-Palmer Quarterly, 22,* 111–123.

Philips, S. U. (1972). Participant structures and communicative competence: Warm Springs children in community and classroom. In C. B. Cazden, V. P. John, & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 370–394). New York: Teachers College Press.

Ramirez, A. (1988). Analyzing speech acts. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 135–164). Norwood, NJ: Ablex.

Rist, R. C. (1980). Blitzkrieg ethnography: On the transformation of a method into a movement. *Educational Researcher, 9* (2), 8–10.

Sacks, H. (1972). On the analyzability of stories by children. In J. J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics* (pp. 325–345). New York: Holt, Rinehart and Winston.

Shuy, R. (1988). Identifying dimensions of classroom language. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 113–164). Norwood, NJ: Ablex.

Spindler, G. (1982). *Doing the ethnography of schooling.* New York: Holt, Rinehart and Winston.

Tannen, D. (1984). *Conversational style: Analyzing talk among friends.* Norwood, NJ: Ablex.

Tenenberg, M. (1988). Diagramming question cycle sequences. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 165–194). Norwood, NJ: Ablex.

Van Maanen, J. (1988). *Tales of the field.* Chicago: University of Chicago Press.

Wallat, C. & Piazza, C. (1988). The classroom and beyond: Issues in the analysis of multiple studies of communicative competence. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 309–343). Norwood, NJ: Ablex.

Zaharlick, A., & Green, J. (1991). Ethnographic research. In J. Flood, J. Jensen, D. Lapp, & J. Squire (Eds.), *Handbook of research on teaching the English language arts* (pp. 205–225). New York: Macmillan.

3 Ethnomethodology and the Possibility of a Metaperspective on Literacy Research

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Interest in multidisciplinary research on literacy arises from a belief and a hope. The belief is that literacy phenomena are so complex that no one approach can illuminate all of what is called literacy. The hope is that the use of multiple perspectives will tell us more than we could know about literacy from any one perspective. I share this belief but am guarded in my hope. Will the outcome of multidisciplinary research be more knowledge about a single, coherent "whole," called literacy? Or will such research produce simply a list-like collection of things each discipline claims to know? Will the whole be more than the sum of its parts?

The possibility of doing multidisciplinary research raises one central question: Is it possible for researchers from different scientific traditions to share a metaperspective from which the contributions of each discipline can be evaluated and articulated into a coherent view of the phenomena called literacy? About this possibility I am less guarded. There can be no single metaperspective that would allow us to judge and articulate the claims of all the disciplines that study literacy. There can be no such metaperspective because there is no single conception of science that each relevant discipline shares. The most and the best we can hope for is multidisciplinary research on literacy within each, or any, conception of science on which researchers involved can agree.

The Issue of Compatibility

In the past decade there was continuing interest among education researchers in the question of the compatibility of different forms of research: experimental versus interpretive, positivist versus constructivist, empiricist versus humanist, etc. (see Beach; Green; Hillocks; Shanahan; and Kamil; this collection). Often the question was addressed in terms of the possibility of mixing quantitative and qualitative approaches to research (Smith & Heshusius, 1986; Howe, 1988; Gage, 1989).

The old compatibilists (Nagel, 1963; Hempel, 1963), who sought a unity of science, assumed that all phenomena could be explained deductively, with the facts of sociology reducible to (explained by) the facts of psychology, and the facts of psychology reduced to biology, to chemistry, and ultimately to physics (see Carnap, 1953). These were the positivist philosophers of science.

The incompatibilists have been the critics of positivism (e.g., Schutz, 1962; Kaplan, 1964). They have focused on the meaningful character of human action as centrally relevant for inquiry into human conduct. Action must be accounted for from the point of view of those who produce it, and not from the point of view of the analyst. The incompatibilists do not believe that human action can be literally described and deductively explained (see Wilson, 1970). Instead, they call for interpretive description and explanation in terms of actors' intentions, motives, purposes, and the like (see Smith & Heshusius, 1986, for a concise treatment).

The new compatibilists say that positivism is dead and that all rational, controlled inquiry involves interpretation, i.e., is hermeneutic (see Rorty, 1979). Their postpositivist philosophy of science is pragmatic, allowing a mixing of methods and methodologies[1] as the researchers see fit. Their criterion of adequacy of methods and methodologies is "whatever works." This mixing of natural science and human science methods and methodology is supported by such commentators as LeCompte and Goetz (1982), Miles and Huberman (1984), and Reichardt and Cook (1979) and is explicitly called for in the writings of Garrison (1986), Macmillan and Garrison (1984), and Howe (1985, 1988).

On the whole, the incompatibilists are right, though not necessarily for the reasons they put forward. Three matters have not received sufficient attention in the debate: differences in types of sciences, differences in interest between the sciences, and differences in the general domain assumptions appropriate to each type of science.

There are at least two generic types of science concerned with human behavior[2]: natural science and human science. Within human science I distinguish between social and cultural science.[3] By *science* I refer to ideal types (see Weber, 1949): characterizations of forms of rational, controlled inquiry[4] in terms of idealized, preferred features.

Each science, as rational inquiry, is controlled by a different interest or telos. Natural science is interested in the structure of natural phenomena, the empirical relations between structures and/or elements of such structures, and the functions such structures play within systems of phenomena. Social science is interested in the normative grounds of persons' actions (beliefs, norms/rules, goals, values). Cultural science is interested in the constitution of action and activities with respect to their normative content and rational properties of their organization.

Each science operates on a different set of domain assumptions. Natural science assumes that its domain consists of naturally occurring, well-bounded objects, having universal, mathematical structures. The term *object* is meant in a wide sense to include perceptible objects, like the flora and fauna of rainforests; theoretically posited objects, like waves and particles; and schema and phonological decoding systems. All such objects are abstractions and idealizations based upon empirically observable, measurable events, occurrences, and phenomena. In that the objects are well-bounded, their identities are relatively context-independent.

Social and cultural sciences assume a domain of objects meaningful to the actors whose actions and activities are studied. The domain consists perceptually of empirically observable events, occurrences, and phenomena, but the proper level of focus within the domain is not at this purely physical level. The focus is on those events, occurrences, and phenomena in terms of their "meaning" (to the actors) within the circumstances of their appearance. Objects for the human sciences are much more imprecisely bounded than the objects of natural scientific inquiry. The identity of objects for the human sciences is relatively context-dependent.

The social and cultural sciences differ in what they take to be the source of the meaning of actions and human artifacts. Social sciences view the actor's intention, or project, as the source of an action's meaning (e.g., Schutz, 1962). Cultural sciences view meaning as a collective sedimentation of interpretations of actions over time by members of a community (Austin, 1970). The meaning of action is a matter of what members can take this or that type of action to mean, and whether they can justify their interpretations of the action in question. Human sciences with an interest in culture put the emphasis on community conventions and interpretations, while those interested in accounting for specific courses of action put the emphasis on actors' intentions. Social and cultural sciences' descriptions of persons' intentions and mental states or community conventions cannot be adequately paraphrased into the extensional idiom required by the standard logic of natural science (see the illuminating discussion by Wilson, 1987).[5]

Given these differences in interests and domain assumptions of the sciences, the methodologies of natural and human sciences cannot be combined. Their assumptions and methodologies are not compatible. Thus, no one of the sciences can be used as a metaperspective for evaluating and articulating contributions from each and all of the disciplines which engage in research on literacy.[6]

Ethnomethodology and the Types of Science

Ethnomethodology is a subdiscipline of sociology, though the disciplinary perspective has found use in anthropology and linguistics.[7] Ethnomethodology (EM) is concerned with the problem of social order, though its concern is different than—one might even say at a right angle to—the concern of conventional sociology. Conventional sociology, done as a natural science or a social science, is concerned with patterned action, sometimes called social structure. The task for the conventional sociologist is to describe and explain the production and reproduction of social structure. Instead of trying to explain how social order/structure is caused by external factors, EM focuses on the taken-for-granted rational, organizational properties of everyday activities (Garfinkel, 1967, 1988).

Conventional sociologists conceive of behaviors as instances of certain kinds of actions and activities (e.g., lessons) or as displays of certain skills (e.g., reading). Conventional sociologists typically are not concerned with how members of a community can recognize what others are doing in social interaction.

Rather than being concerned with factors that explain empirical patterns, ethnomethodologists are concerned with how practical reasoning and activities are organized within the limits and resources of a culture. Where natural and social science approaches focus on what brings about some type of event, such as poor classroom performance by nonmainstream children, EM focuses on how classroom activities are organized.

As a cultural science, EM examines how members produce and identify perceivedly normal, everyday environments. The ultimate concern is with "culture" as that which makes our world and behaviors intelligible as the world and behavior of humans, as opposed to the world and behavior of organisms or machines.

EM begins with actual, empirical instances of practical reasoning and activities, like reading assessment reasoning and reading lesson activities, and takes them as objects of reflection. The use of these objects, like tapes, transcripts, pictures, or other documents, is mnemonic. Objects are used as perspicuous reminders to analysts about matters already familiar, but not obvious to them as members of the culture being studied.

Materials referenced and presented in ethnomethodological articles and essays are used to persuade the reader that some structure is a structure that is culturally intelligible. The presented materials, then, can be used to judge the adequacy of the claims propounded by the ethnomethodologist.

Ethnomethodological Studies in Education

Let me illustrate this type of inquiry with some examples of studies of reading.

Instruction

The major focus of natural science approaches to instruction has been on teacher effectiveness (Brophy & Good, 1974). The question has been what sorts of instruction, as independent variables, are correlated with or cause differential levels of skill or knowledge acquisition as dependent variables. Such acquisition typically has been measured in terms of student performance on standardized tests or as grade-point averages.

Rather than asking which type of instruction is most effective, ethnomethodologists have asked what counts as instruction, interactionally. The focus for ethnomethodologists has been on the interactional formats that establish culturally possible modes of instruction. Interactional formats consist of typical, uniform, repetitive, recognizable ways persons use to accomplish activities collectively. These "ways" include both speech acts (see Searle, 1969), like questions and commands, and speaker turn distribution techniques (see Sacks, Schegloff, & Jefferson, 1974). In classrooms, perhaps the most widely used format is the question-answer-comment series, also known as the elicitation-response-feedback sequence (see Mehan, 1979; Sinclair & Coulthard, 1975).

Farrar (1982), pulling together ideas from cognitive psychology (Bruner, 1975) and social phenomenology (Heap, 1977), has argued that the elicitation-response-feedback (ERF) sequence should be understood as an instructional sequence. Two persons coproduce a proposition by the first person issuing an elicitation/question, the second speaker responding, and the first speaker offering feedback. If a teacher asks, "what were the, um, donkeys like?" a student answers that they were impolite, and the teacher says "right," then a proposition has been coproduced, which can be expressed by the sentence, "the donkeys were impolite." Using this framework, Farrar (1982, p. 1) has stipulated that

> Instruction is the joint accomplishment by student and teacher (through the elicitation/response/feedback format) of those propositions which may be taken to constitute the course and for which both student and teacher are accountable.

This notion of instruction has been widened to include teaching skills using the ERF format. In the vocabulary phases of small-group reading lessons in elementary schools, if a teacher asks how to pronounce some word/graphemes, the correct pronunciation of a word followed by positive teacher feedback produces a lesson corpus item. Students are then accountable for knowing the correct pronunciation of the word, whether they themselves replied to the teacher's question or merely heard the ERF sequence within which the correct pronunciation was offered and certified as correct (see Heap, 1985). Recently this conception of instruction, as interactively achieved through a conventional format, has been used to evaluate and criticize leading educational software in the area of mathematics (Titus, 1990).

An ethnomethodological approach examines instruction from the viewpoint of what parties to a setting could take to be instruction. Our claim is that whether or not any teacher intends to do instruction, students can learn facts and skills through the running of elicitation-response-feedback sequences. However, the running of such sequences is no guarantee that students will learn anything. Students merely are accountable for knowing what the lesson (instructional sequences) covered as propositions/skills, whether or not they are called on to display such knowledge within the lesson.

Literacy Assessment

Natural science approaches to reading assessment take it that reading skills are relatively context-free, well-bounded processes that are possessed to determinate degrees by students. If students "possess" these skills, they should be able to transfer them to any materials or setting where analysts believe that these skills can be used. The test designers' effort is to contrive tasks that will allow these skills to be displayed unequivocally under controlled stimulus conditions. Test items must meet criteria of validity and reliability. A student's graded performance on a test task is a measure of the student's level of skill (e.g., at word recognition, phonetic analysis, passage comprehension).

An ethnomethodological approach to assessment treats standardized testing as activities that do not simply measure preexisting skills. Such tests constitute students as possessing certain kinds and levels of skills (see Cicourel et al., 1974). Performing at such and such a level *counts as* having certain reading skills, whether or not those skills, and just those skills, were used or not used to "complete" the test.[8] Consistent with the domain assumptions of EM, whether reading skills can be said to have been displayed will depend on the circumstances for making such judgments.

Ethnomethodological research on reading assessment has taken up the question of what any assessor can claim to know about the reading skills of a student based on that student's participation in a reading test, or participation in a classroom reading activity that is organized under test-like assumptions.

A number of problems are associated with interpreting what anyone can claim to know about the cognitive reading processes "possessed" by particular students (see Heap, 1980). In the case of a frame problem, analysts need to decide whether an incorrect outcome indicates a deficiency in the target skill or results from a difference in the student's frame of reference for understanding and completing the task. Only if an assessor can show that frame problems were absent can the assessor claim with certainty that an incorrect outcome indicates a deficiency in the target skill of the test.

Take the Gates-MacGinitie Reading Tests, second edition. Level B, Form 1, page 6, item 6 has drawings of four road signs. Under each sign is a place to put a pencil mark. The question reads: "Which sign tells the driver to look out for boys and girls?" The four signs: *Bus Stop, Truck Crossing, Keep Right, Watch for Children*. Presumably the fourth sign is the correct choice. What if the student selects the first sign? Does that mean he or she did not comprehend the question? How does one know whether in the child's experience the sign *Bus Stop* signifies that the bus driver should watch out for boys and girls? Standardized tests provide no opportunity to obtain more approximate knowledge of children's cognitive processing.

Any test item, given some context, can admit different answers. While the contextual frame of reference may be obvious to test designers, obviousness is no guarantee that students will share the designers' frame for any particular test item.

The frame problem, along with other problems with tests, is not an empirical difficulty that can be overcome by tinkering within a natural science approach to assessment or by refining measurement techniques. They are problems endemic to the very social organization of testing reading, when reading is conceived solely as cognitive processes that go on in the minds of readers. Tests are designed to allow for the display of these processes through persons' behaviors. Whatever persons do in apparent response to test demands is treated as evidence of the skills or knowledge the test seeks to measure. But the displays are not the skills themselves. Persons designing tests always will have to give test takers some tasks to do to display their skills. The rub is that what designers give can be understood in unexpected ways by test takers. Hence the frame problem.

If all this is true, then when a student gets thirty-three out of fifty items correct, there can be no certainty that the student's failure to answer correctly the remaining seventeen questions is evidence of a lack of the relevant skill. Since the frame problem will not go away with a bit of natural scientific finesse (see Heap, 1980), there is no way of calculating a margin of error. While we do know that 66 percent typically *counts* as poor reading, we simply do not know what 66 percent on a test actually means.

Reading as Cultural Activities

The natural scientific approach to reading has conceived reading as naturally occurring processes, which are learned in a certain serial, or parallel, order. Reading, as cognitive processes, is conceived as a natural phenomenon, as relatively context-free in character. This assumption allows theorists to generate models of "the reading process" which attend strictly to what goes on in the mind/brain as visual (graphemic) information is processed. Fluent reading, in this view, consists of well-bounded, determinate processes, involving definite pieces of perceptual, mind/brain machinery (see Gough, 1972; LaBerge & Samuels, 1985; Ruddell & Speaker, 1985; Rumelhart, 1985).

Rather than conceive of reading as learned, natural, cognitive processes, EM examines reading as historically developed, cultural activities (see Beach, this collection; Heap, 1991).

First, reading is not like biological, geological, or any other purely physical processes. While biophysiological capabilities and processes are necessarily involved, the mere presence of such capabilities does not guarantee that reading will occur. The difference between reading and other processes from a natural scientific term is that *reading can be done well or poorly*. The activities we call reading are subject to moral evaluation; they have to meet criteria of success or rationality.

A successful reading is a reading that meets criteria of accuracy, coherence, or usefulness. A rational reading is one done in a manner that is appropriate to the conditions of its accomplishment, as when we read a telegram in a slow, careful fashion, or read an advertisement quickly while walking down the street.

Second, theories of reading do not apply to all of what we call reading. They apply to *fluent reading*. Reading that is fluent is reading that is successful or rational. Unless our interpretation of a text is contradicted by other persons, texts, or worldly experience, rational reading that makes sense of the facts counts as successful reading. Since we believe that acting rationally is the surest way to success, theories of reading can be understood as theories of reading rationally.

Third, there are five conditions for calling reading rational. Natural scientific approaches to reading have focused on only two of those conditions: the nature of and the capabilities of the medium of processing (mind or machine). Three further conditions or constraints are relevant for determinations of rationality: materials, purposes, and circumstances. Until an understanding of these conditions is incorporated into theories of reading, we can have no understanding of reading as rational action. Thus, we cannot understand adequately what fluent reading could be.

In order to understand fluent reading, we need to recognize that reading is always reading *of* something. To read fluently it is necessary to identify adequately the materials at hand. And there needs to be a purpose when one reads; otherwise, reading would never be done. It is possible and most likely that the purpose for reading will be nested in higher-level purposes which are satisfied fully or partially by acts of reading. Further, the activities and states of affairs physically external to the document that is read must be the ones needed if the text is to be put to successful use. If one intends to use a new photocopier, then the photocopier ought to be at hand as one reads the instructions for using it. Finally, the circumstances of reading include the reader's knowledge of, and familiarity with, the states of affairs represented in the text.

Ethnomethodological theorizing about reading as cultural activities has focused so far on the materials of reading (Heap, 1991). It turns out that it is possible to construct an analytic continuum of types of reading materials. Current, natural scientific theories of reading deal with materials at only one end of the continuum. From a sociological concern with the production and reproduction of social order, reading materials at the other end of the continuum are as important as the kinds of reading materials to which top-down, interactive, or bottom-up theories of reading best apply.

Current reading theories, with few exceptions (perhaps Goodman, 1985), deal primarily with narrative or expository texts. I call such texts "reflective." Reflective writing is designed at the document level (signs on a plane) and composed at the text level (meaning), to facilitate reflection on some state of affairs expressed through writing (Heap, 1991). The primary purpose for reading narrative or expository texts is innertextual: the purpose is satisfied over the course of the reading acts themselves. The category of reflective writing includes newspaper and magazine articles, short stories, novels, poems, and works of nonfiction (like this essay).

At the other end of the continuum of reading materials are enabling texts. These are designed and composed to facilitate accomplishment of some action beyond the acts of reading. The primary purpose for reading enabling writing is transtextual: the purpose is satisfied by engaging in actions that transcend reading the document. The category of enabling writing includes forms for record keeping, accounting, purchasing, registering, banking, applying, and so forth. Enabling writing is encountered as schedules, contracts, assembly and operation manuals, indices, postage stamps, money, bills, labels on machinery, grocery lists, telephone directories, inventories, menus, road signs, and so on.

Reflective and enabling writing differ primarily in forms of their quality, determined by their cohesion (Halliday & Hasan, 1976) or coherence (van Dijk & Kintsch, 1983). Cohesion and coherence refer to the local/micro and global/macro relations between the sentences or propositions that comprise a reflective text. A text having the quality of coherence at the local and global levels facilitates judgments about, or responses to, states of affairs expressed in the text.

In contrast, the identifying quality of enabling texts is not coherence but practicability. The issue of quality is an issue of whether some piece of enabling writing provides a practical basis for accomplishing some activity. A bus schedule, menu, directory, or banking form will be found to be of inferior quality not because the text is incoherent, but because it is impractical as a means for achieving the ends for which it was composed.

Reflective and enabling writing also differ in terms of their relationship to the context. A reflective text can be found to be coherent independent of the context. A reflective text about the endearing architectural features of a nation's capital can be read and understood whether it is read in the capital or on a different continent. Reflective texts are the epitome of what David Olson (1977) and others have taken all texts to be: language that can be understood independently of knowledge of its writers, the place and time of its production, and the place and time at which the language is encountered.

The practicability of an enabling text depends on circumstance. Following instructions for lighting a propane camp stove or successfully ordering a meal from a menu requires appropriate circumstances: the presence of the right kind of a camp stove, or the availability of a restaurant open for business and a capable waiter/waitress interested in taking your order (assuming you are in the restaurant whose menu you are consulting). In that enabling writing is designed and composed to facilitate, to enable, the accomplishment of some standard (trans-textual) purpose, its practicability is often tied to the circumstances under which such writing is typically read.

If it is true that the defining feature of developed and developing nations is the presence, operation, and maintenance of bureaucracies (Weber, 1968), then enabling writing is absolutely essential to the production and reproduction of stable societies. Yet we have no theory of reading that applies to all or most of what can be called enabling writing.

The extension of reading theories to cover the reading of enabling writing must handle the question of where the boundary is to be drawn between "reading" and the rest of the knowledge, skills, and processing relevant to the successful, rational completion of those activities within which "reading" is embedded.

The extension of reading theories to cover the entire continuum of reading materials will require attention to the organization of problem solving and practical reasoning in everyday life (see Heap, 1988). If such an extension occurs, theories of reading will be so broadened as to be no longer simply theories of reading. They will be theories of how persons can and should carry out instrumental activities. The theories will be avowedly normative: stating how some activity should be done. And they will be descriptive of how that activity could be done in a normal way by average persons for standard purposes (see Heap, in press).

To take seriously the notion that reading is a rational, cultural activity, rather than primarily or solely a set of well-defined cognitive processes, is to begin to recognize the inappropriateness of the natural scientific approach as the only approach when theorizing about reading.

Domain Assumptions of Natural and Social Sciences

The central issue that divides natural and human scientific inquiry is how to handle the meaningfulness of objects within the phenomenal field of inquiry, that is, what there is to "see" under the domain assumptions of a form of inquiry. Persons taking a natural scientific approach to human conduct do not deny that persons' actions are meaningful to them and their fellow interactants. Instead, they treat actions as having stable meanings, recognizable to the analyst, but largely irrelevant to the natural science interest of explaining human conduct in terms of variables with which such conduct is correlated. All that is required for natural scientists is that the objects of study be identifiable in valid, reliable ways, no matter what the objects/actions mean to actors themselves.

It is a domain assumption of natural science that the social world is continuous with the natural world. This allows the assumption that social phenomena can be described within the same extensional idiom (see Quine, 1960) as natural phenomena.

The assumption that the organization of the world (social or natural[9]) satisfies the properties required by symbolic logic is compatible with the foundational domain assumption of natural science: essentialism. Going back to the Greeks (Plato, 1953; Aristotle, 1948), essentialism is the assumption that the world of things, and the world as a thing, are organized into discoverable classes of objects. A class of objects is defined by the set of properties shared by each member of the class. These, then, are understood to be the essential features of the object, the features that make that object identifiable as what it is: a member of some discrete, well-formed, logical class. These features are used as criteria for specifying the identity of objects in valid and reliable ways. At the most basic level, the identity of an object is its meaning, in the sense that some behavior of an organism within time-space coordinates "means," counts as, a certain type of action.

The essentialist assumption, reinforced by the requirements of symbolic logic that an object must be a member of a well-drawn class,[10] supports a further domain assumption of natural science. Following the far-reaching work of Galileo, which made available to inquiry a domain having an idealized mathematical structure (see Husserl, 1970), the identity of objects is taken to be relatively context-free. If the identity of an object can be fixed by determining a logical class to which it can be assigned, then the identity of the object can be taken to inhere in the object itself.

In studies of effective instruction, natural science requires discrete variables. The logical structure of these variables, as well-drawn classes, is taken to mirror the essentialist structure of classroom reality (i.e., the phenomenal field wherein "instruction" and "reading achievement" are identifiable). In conducting reading assessments, natural scientific approaches take reading skills to be relatively context-free as displayed unequivocally in testing situations. In theories of reading, reading is conceived of as a class of processes that can be specified relatively independently of reading materials, purposes, and circumstances.

Opposed to the natural science assumption of the relative context-freedom of object identity is the EM assumption of the relative context-dependence of object identity. EM assumes that the world as an intelligible phenomenal field for members and analysts is organized in ways that have developed over time in response to local exigencies of human need and circumstance. Ordinary language captures, portrays, and constitutes the phenomenal field of everyday life, for members and for analysts, in locally rational, historically shaped ways.

Wittgenstein's work on language provides an alternative to the essentialist symbolic logic notion of class as the only type of category into which objects can be organized. Instead of assuming that something must have all the features shared by members of some class in order to count as a particular type of object, Wittgenstein reflected on the grammar of ordinary language. Terms in English and in all other natural languages do not name logical classes. Take the term *game*. If one looks at each thing which, in some circumstance, can be called a game, one does not find a single, common set of properties upon which use of the term *game* rests. Compare a child's game, of tossing a ball at a wall and catching it, with chess or board games. Instead of finding a common set of properties, "we see a complicated network of similarities overlapping and criss-crossing; sometimes overall similarities, sometimes similarities of detail" (Wittgenstein, 1958, p. 32). Wittgenstein has called these similarities "family resemblance." In his view, *games* form a family, not a logically drawn class based on shared, essential features.

For all phenomena known to persons in everyday life for which they have ways of speaking, we can expect that those ways of speaking—the terms used—will fall into families rather than logical classes. We can expect to find classes only where it has been important to persons to define and control their use of terms so that each term designates a well-drawn class of objects. That is, we can expect to find classes as things that scholars have endeavored to draw and define.[11]

The assumption that the things of everyday life are organized into families instead of classes is central to my conception of particularism.[12]

Particularism is concerned with what something can be called, in particular, in some circumstance. My approach to particularism has its roots in the linguistic philosophy of Wittgenstein, Austin, and Ryle. From their work comes the central insight that what something is, or is a display of, for members of some cultural, linguistic community depends on what that thing can be called. What it can be called appropriately depends on the conventions and situated ways of using language which that community can be taken to respect or at least find sensible (see Heap, 1976). From the methodological perspective of EM, objects are always objects-for-someone, but they are always objects as anyone (any apparently competent language user) could take and report them to be. They are within language objects-for-anyone-of-us in some circumstance.

In the pragmatism of particularist thought, the source or basis for an everyday object being called one thing rather than another is the function it serves. In being used, usable, or accountable (see Garfinkel, 1967) in certain ways, something counts as a member of some family. For all practical purposes, it *is* a tool, a toggle, or writing.

An object becomes a tool—can be called a tool—by being used like a tool; its use gives it a family resemblance to a tool. A command in a software program becomes a "toggle" because the object which it manipulates, e.g., right-justification mode, is either "on" or "off." That the command operates like a toggle gives adequate grounds for establishing the convention of calling the hitting of a sequence of keys "toggling." So it is with the very idea of issuing a "command" from a keyboard by pressing a sequence of keys. The use, the function, of pressing the keys is *like* a command issued by one person to another: it brings certain desired results.

In seeing that the stretching and expansion of usage works from family resemblance—"what something is like"—we note one other important feature of particularism which is tied to a second relevant domain assumption of EM: the relative context-dependence of object identity.

A use or function occurs only within certain contexts, circumstances, settings. Something can be called "writing," because in the circumstance of its occurrence it is enough like writing to be called writing, even though it is only a scribble made by a child (Luria, 1978). There is nothing about the scribbling in itself to make it essentially "writing." Rather, what makes the scribbling "writing" is how it can be understood within the contexts of its production and use: what the child says about the scribbling, what the child has written and said before about scribbling, and how recent scribblings compare in shape to prior efforts as they are each embedded in intelligible activities.

For particularism, the source of an object's identity is what people do and what people can say about what they do. In this way, an object's identity is historically, culturally, and socially derived. An object is what it is called because it appears in a context wherein it is intelligible and (somehow) appropriate to call it that. Its identity is relatively context-dependent, tied to purposes and knowledge of speaker/hearers and producer/users, and to the locally meaningful time and place of the particular object's appearance.

Natural science inquiry assumes that the identity of an object/action can be determined according to features which the object shares with some logical class of objects. Social science inquiry assumes that the identity of an object/action can be determined by the analyst ascertaining the intentions or project of the actor(s) whose behavior has produced the object/action in question. Cultural science inquiry, in the form of EM, assumes that the identity of an object/action can be determined by the analyst ascertaining what such an object/action could be called by members of the relevant linguistic community. The domain assumptions of natural science can be called objectivism; those of social science, subjectivism; those of cultural science, situationism.

The domain assumptions of cultural science are basic for the tasks of analysis. For EM what is important is the public meaningfulness/identity of actions for which persons can be held normatively and morally accountable according to the normative order of a culture, primarily its conventions of language use and action. Persons are morally accountable in the sense that how they have done what they can be said to have done is a matter that can be judged by other persons. Persons who can be seen to have "danced a tango" can have their behavior evaluated as good and graceful, poor and awkward, etc. Persons who can be seen to have "job hunted" can have their behavior evaluated as rational or incompetent, and successful or unsuccessful. It is the normative and moral accountability of human conduct, as this conduct can be identified and understood by witnesses, that is consequential for the production and reproduction of everyday society.

Methodologies of Natural versus Cultural Sciences

The natural science approach to inquiry uses an objectivist perspective that admits only empirical evidence from sensory experience of objects from well-drawn, discrete classes. The objectivist perspective is concerned with objects in relation to the logical classes of the researcher's discipline-based theories and knowledge.

The objectivist perspective is what Sinclair and Coulthard (1975) have called an end-coding perspective. In using this methodological perspective, the meaning/identity of objects/actions is decided by examining what those objects came to "in the end." The end-coding perspective looks at a stretch of completed action, or an artifact such as a student's story, and codes and analyzes the action or artifact based on a reconstructed logic of what some person's skills or processes must have been in order to produce the data in question (see Garfinkel, 1967, p. 67).[13]

The cultural science approach to inquiry uses a situated perspective derived from theorizing in phenomenology (Husserl, 1962), existentialism (Heidegger, 1962), and ordinary language philosophy (Wittgenstein, 1958; Austin, 1970). This perspective works from particularist assumptions and is concerned with the relatively context-dependent constitution, or sociocultural organization, of objects/actions as a normatively and morally accountable matter. This perspective admits a priori evidence based *either* on sense experience or on ratiocination (reasoning) (see Bradley & Swartz, 1979). As cultural members, researchers analyze members' knowledge that reflects the "possibilities of phenomena" embodied in the grammar of ordinary language usage (see Wittgenstein, 1958). Researchers also disclose their reasoning about data in order to secure the claim that the data are organized in culturally possible ways.

Instead of a concern with the actual, empirical identity of some action, the situated perspective is concerned with the *possible* identity of that action. It is concerned with the possible identity insofar as members themselves could determine that identity, because all that members themselves have to go on in their interactions is what the actions of others look like, what they likely mean. Both members and analysts depend on their ordinary language competence to say "what should be said" when they encounter a human action or artifact in particular contexts (see Austin, 1970).

The situated perspective is the perspective of parties to a setting, of members as *witnesses* or *hearers*. It is from a witness's perspective that members and analysts decide "what should be said" about what is seen or heard.

As a witness's perspective, a situated perspective is what Sinclair and Coulthard (1975) have called a "now-coding" perspective. From a now-coding perspective we ask what some action or event "means," what its functions appear to be for witnesses "now" as it unfolds. A sequence or set of actions can, and must, be "coded" and "analyzed" by members over the course of its temporal unfolding and accomplishment.

What is consequential for members is what their actions could be taken to mean in the here and now. Claims made "after the fact" about what some earlier action was in retrospect are not admissible from a situated perspective.

How is all of this related to our theme of a multidisciplinary approach? The objectivist and situated perspectives are methodological positions based upon different domain assumptions. Contrary to the ideal of a multidisciplinary approach, which may attempt to merge objectivist and situated perspectives, it is not possible to mix one methodology with the other. It is not possible to use the methodology of one science while retaining the domain assumptions of another.

Whenever there is a call for mixing of natural science and human science methodologies (e.g., Howe, 1988), one set of domain assumptions will be operative, usually those of a natural science approach.[14] There must, and can, be only one set of domain assumptions, to which a consistent methodology must be articulated.

Research on "literacy" cannot be based solely on a natural scientific perspective on human conduct. Given ethnomethodology's domain assumption of particularism, we would not expect that there could be a single, logically coherent domain called literacy which would encompass the domain of inquiry for each discipline involved in literacy research. At issue here is the question of what we could mean by the notion of a logically coherent domain, as opposed to logically coherent analyses. If we mean a domain that is organized in terms of a well-drawn, clearly bounded, logical class of objects called literacy, composed of logical subclasses called reading, writing, functional literacy, computer literacy, etc., then there is no hope of a coherent meta-domain, or super class, of inquiry called literacy.

What are we to do? What can be done by way of multidisciplinary research on literacy if a natural science approach is not available as a metaperspective? What can be done if it is not possible for researchers from different scientific disciplines to share a metaperspective, from which the contributions of each discipline can be evaluated?

Those of us interested in multidisciplinary research on literacy can begin by understanding our own disciplinary tradition, its interest/telos, domain assumptions, and methodology. We could then understand other traditions as possibly serving *different interests* through inquiry into *different phenomena and differently conceived analytic objects.*

These differences in ultimate interest (telos), phenomena, and analytic objects will be greatest between the natural science and human science traditions. Within the human sciences, the social and cultural sciences largely share a common tradition. Indeed, ethnomethodology as a cultural science traces its roots to the interpretive social science tradition of Max Weber (1968), as phenomenologically clarified by Alfred Schutz (1962). In the end, only disciplines sharing compatible traditions of rational, controlled inquiry can be resources for planning, executing, and evaluating a multidisciplinary research project (Green & Harker, 1988).

While no one conception of science can stand as a metaperspective for unitied all research on "literacy," each conception of science stands as the perspective that unites the research done under that perspective. Thus we have three scientific perspectives but no scientific metaperspective.

Notes

1. *Methods* refers to the techniques of research, such as fixed-choice interviewing and participant observation. *Methodology* refers to the logic for justifying claims made via the use of particular methods. This "logic" covers epistemological perspective and the logical status of claims.

2. A note on the meaning of *behavior.* Natural science methodology is concerned with observable behavior, irrespective of the meaning of that behavior to the human (primate) who produces it. Human science methodology is concerned with behavior insofar as it is meaningful to the actor. Such behavior is called *action* (see Weber, 1968; Geertz, 1973, chap. 1).

3. I have not included in this typology "critical science" in any of its forms. While all science can be termed critical, what makes a science "critical" in current academic parlance is the topics it takes up, the values it serves, and the uses to which its practitioners are committed. Different pieces of scholarship carried out under the label of "critical science" often exemplify domain assumptions of one or the other of the three sciences I address.

4. Under my wide use of *science* I am open to including work in literary criticism and history.

5. In Wilson's view (1987), this very fact is enough to distinguish natural science approaches from human science approaches. All talk by incompatibilists about interests, ontological domain assumptions, and epistemological perspectives and claims is pure icing on the cake. Technically, he is right, but the differences between natural, social, and cultural science inquiry are more easily and fully grasped in terms of interests, domains, and perspectives.

6. Disciplines often include work done using different scientific approaches. Psychology usually is done under a natural science approach, as are parts of sociology, anthropology, political science, much of linguistics and geography,

and most of economics. Cultural science approaches are found in anthropology, sociology, and linguistics, while social science approaches are found in sociology, anthropology, political science, certain corners of economics, and in pockets of social and cognitive psychology.

7. In linguistics the influence of ethnomethodology has been through its own subdiscipline, called conversation analysis (see Sacks, Schegloff, & Jefferson, 1974).

8. I put "complete" in quotation marks because a student who stops work on any of a number of popular standardized tests will be treated as having finished the test. The absence of answers will count as a display of the absence of the target skills of the test.

9. For a natural scientific approach there is no sensible, relevant distinction to be drawn between the social world and the natural world; all there is is the natural world. Hence, there is no sensible, relevant distinction between philosophy of science and philosophy of human science; all there is is philosophy of science.

10. Actually, something in the phenomenal field of a natural scientist does not count as an object unless it can be treated as a member of a well-drawn class. The concepts of class (or "kind") and object are logically co-implied.

11. If human scientists are to account for human conduct or explicate how human conduct is constituted, they must respect how such conduct is understood by members. It is understood via the terms and grammar of ordinary language. This fact introduces certain constraints on concept formation in the human sciences (see Schutz, 1962; Heap, 1976).

12. For a different, though somewhat related, conception of particularism applied to social science interests, see the contribution by Bloome and Bailey in this volume.

13. The subjectivist perspective of social science inquiry often uses this end-coding perspective, but data are coded and analyzed in terms of what persons must have meant or intended "all along." Interpretation of what the intention was is used to reconstruct the identity of the actions in which those persons had been engaged. Recall that in subjectivism it is the actor's intention or project that determines the identity of an action (see Schutz, 1962).

14. It is worth noting that Howe (1988), in demonstrating that quantitative and qualitative approaches are compatible, conceives data gathering, by all researchers, to be in terms of variables. His postpositivist philosophy works from natural science domain assumptions.

References

Aristotle. (1948). *Metaphysics.* W. D. Ross (Ed.). Oxford, England: Oxford University Press.

Austin, J. L. (1970). *Philosophical papers.* New York: Oxford University Press.

Bradley, R., & Swartz, N. (1979). *Possible worlds.* Indianapolis: Hackett.

Brophy, J. E., & Good, T. L. (1974). *Teacher-student relationships: Causes and consequences.* New York: Holt, Rinehart and Winston.

Bruner, J. (1975). From communication to language—A psychological perspective. *Cognition, 3,* 255–287.

Carnap, R. (1953). Testability and meaning. In H. Fegel & M. Brodbeck (Eds.), *Readings in the philosophy of science.* New York: Appleton-Century-Crofts.

Cicourel, A. W., Jennings, K., Jennings, S., Leiter, K., MacKay, R., Mehan, H., & Roth, D. (Eds.). (1974). *Language use and school performance.* New York: Academic Press.

Farrar, M. P. T. (1982). Defining and examining instruction: An analysis of discourse in a literature lesson (Doctoral dissertation, University of Toronto, 1981). *Dissertation Abstracts International, 42,* 4274-A.

Gage, N. L. (1989). The paradigm wars and their aftermath: A "historical" sketch of research on teaching since 1989. *Educational Researcher, 18* (7), 4–10.

Garfinkel, H. (1967). *Studies in ethnomethodology.* Toronto: Prentice Hall.

Garfinkel, H. (1988). Evidence for locally produced, naturally accountable phenomena of order*, logic, reason, meaning, method, etc., in and as of the essential quiddity of immortal ordinary society, (I of IV): An announcement of studies. *Sociological Theory, 6,* 103–109.

Garrison, J. (1986). Some principles of postpositivistic philosophy of science. *Educational Researcher, 15* (9), 12–18.

Geertz, C. (1973). *The interpretation of cultures.* New York: Basic Books.

Goodman, K. S. (1985). Unity in reading. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed., pp. 813–840). Newark, DE: International Reading Association.

Gough, P. B. (1972). One second of reading. In J. Cavanagh & I. Mattingly (Eds.), *Language by ear and by eye* (pp. 331–358). Cambridge, MA: MIT Press.

Green, J. L., & Harker, J. O. (1988). *Multiple perspective analyses of classroom discourse.* Norwood, NJ: Ablex.

Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English.* London: Longman.

Heap, J. L. (1976). What are sense making practices? *Sociological Inquiry, 46,* 107–115.

Heap, J. L. (1977). Toward a phenomenology of reading. *Journal of Phenomenological Psychology, 8,* (1), 103–113.

Heap, J. L. (1980). What counts as reading: Limits to certainty in assessment. *Curriculum Inquiry, 10,* 265–292.

Heap, J. L. (1985). Discourse in the production of classroom knowledge: Reading lessons. *Curriculum Inquiry, 15,* 245–279.

Heap, J. L. (1988, December). *Reading as rational action: Functioning and literacy in daily life.* Paper presented at the annual meeting of the National Reading Conference, Tucson, AZ.

Heap, J. L. (1991). Reading as cultural activities: Enabling and reflective texts. *Curriculum Inquiry, 21,* 11–39.

Heap, J. L. (in press). A situated perspective on what counts as reading. In C. Baker & A. Luke (Eds.), *Towards a critical sociology of reading pedagogy.* Philadelphia: John Benjamins.

Heidegger, M. (1962). *Being and time.* New York: Harper & Row.

Hempel, C. G. (1963). Typological methods in the social sciences. In M. Natanson (Ed.), *Philosophy of the social sciences: A reader* (pp. 210–230). New York: Random House.

Howe, K. R. (1985). Two dogmas of educational research. *Educational Researcher, 14* (8), 10–18.

Howe, K. (1988). Against the quantitative-qualitative incompatibility thesis, or dogmas die hard. *Educational Researcher, 17,* (8), 10–16.

Husserl, E. (1962). *Ideas: General introduction to pure phenomenology.* New York: Collier.

Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology.* Evanston, IL: Northwestern University Press.

Kaplan, A. (1964). *The conduct of inquiry: Methodology for behavioral science.* San Francisco: Chandler.

LaBerge, D., & Samuels, S. J. (1985). Toward a theory of automatic information processing in reading. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed., pp. 689–718). Newark, DE : International Reading Association.

LeCompte, M., & Goetz, J. (1982). Problems of reliability and validity in ethnographic research. *Review of Educational Research, 52,* 31–60.

Luria, A. R . (1978). The development of writing in the child. In M. Cole (Ed.), *The selected writings of A. R. Luria* (pp. 145–194). White Plains, NY: M. E. Sharpe.

Macmillan, C. J. B., & Garrison, J. W. (1984). Using the "new philosophy of science" in criticizing current research traditions in education. *Educational Researcher, 13* (10), 15–21.

Mehan, H. (1979). *Learning lessons: Social organization in the classroom.* Cambridge, MA: Harvard University Press.

Miles, M. B., & Huberman, A. M. (1984). Drawing valid meaning from qualitative data: Toward a shared craft. *Educational Researcher, 13* (5), 20–30.

Nagel, E. (1963). Problems of concept and theory formation in the social sciences. In M. Natanson (Ed.), *Philosophy of the social sciences: A reader* (pp. 189–209). New York: Random House.

Olson, D. R. (1977). From utterance to text: The bias of language in speech and writing. *Harvard Educational Review, 47,* 257–281.

Plato. (1953). *The dialogues of Plato,* (4th ed., B. Jowett, Ed. and Trans.). Oxford, England: Oxford University Press.

Quine, W. V. O. (1960). *Word and object.* Cambridge, MA: MIT Press.

Reichardt, C., & Cook, T. (1979). Beyond qualitative versus quantitative methods. In T. Cook & C. Reichardt (Eds.), *Qualitative and quantitative methods in evaluation research* (pp. 7–32). Beverly Hills, CA: Sage.

Rorty, R. (1979). *Philosophy and the mirror of nature.* Princeton, NJ: Princeton University Press.

Ruddell, R. B., & Speaker, R. (1985). The interactive reading process: A model. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed., pp. 751–793). Newark, DE: International Reading Association.

Rumelhart, D. E. (1985). Toward an interactive model of reading. In H. Singer & R. B. Ruddell (Eds.), *Theoretical models and processes of reading* (3rd ed., pp. 722–750). Newark, DE: International Reading Association.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language, 50,* 696–735.

Schutz, A. (1962). *The collected papers I: The problem of social reality.* The Hague, the Netherlands: Martinus Nijhoff.

Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language.* Cambridge, England: Cambridge University Press.

Sinclair, J. M., & Coulthard, R. M. (1975). *Towards an analysis of discourse: The English used by teachers and pupils.* London: Oxford University Press.

Smith, J. K., & Heshusius, L. (1986). Closing down the conversation: The end of the quantitative-qualitative debate among educational researchers. *Educational Researcher, 15* (1), 4–12.

Titus, J. J. (1990). *When computers teach: Instruction and the limits of technology.* Unpublished doctoral dissertation, University of Toronto.

van Dijk, T., & Kintsch, W. (1983). *Strategies of discourse comprehension.* Toronto: Academic Press.

Weber, M. (1949). *The methodology of social sciences.* Glencoe, IL: Free Press.

Weber, M. (1968). *Economy and society.* New York: Bedminster.

Wilson, T. P. (1970). Normative and interpretive paradigms in sociology. In J. Douglas (Ed.), *Understanding everyday life* (pp. 57–79). Chicago: Aldine.

Wilson, T. P. (1987). Sociology and the mathematical method. In A. Giddens & J. Turner (Eds.), *Social theory today* (pp. 124–156). Stanford, CA: Stanford University Press.

Wittgenstein, L. (1958). *Philosophical investigations.* New York: Macmillan.

4 Reconciling the Qualitative and Quantitative

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Researchers concerned with the nature and learning of literacy come from a wide variety of fields: literature, rhetoric, linguistics, testing and measurement, elementary and secondary education, anthropology, sociology, psychology, and various amalgams of the above. Further, people within any one of these fields are likely to see themselves as quite diverse in the way they approach problems of literacy. One of the major differences cutting across these fields is that between quantitative and qualitative research. This distinction divides us over questions such as what counts as research, what counts as evidence, and what the principles are by which we connect evidence to our claims. Underlying all these questions are assumptions about the nature of reality and how we perceive and interpret it. These differences are, I suspect, exacerbated by the political needs of researchers in newer fields, like the study of writing, to legitimize both their objects of study and their methodologies.

In 1983 John K. Smith, in *Educational Researcher*, outlined what he saw as the major polarities of the debate over research methods. The first is based on "the relationship of the investigator to what is investigated" (p. 6). According to Smith, those working in the empirical tradition of Comte, Mill, and Durkheim posit a reality outside themselves which can be examined in an unbiased fashion through the use of appropriate methods. Because they posit the independent reality, Smith calls them realists—a more neutral term than positivist. Researchers in this tradition attempt to eliminate their own values, biases, preconceptions, and emotional involvements. Qualitative researchers in the tradition of Dilthey, Rickert, and Weber believe that because everything must be examined through the human mind and because knowledge is a product of human minds, any separation of the investigator from that which is investigated is impossible. Smith uses the term idealist to designate researchers in this tradition, emphasizing their insistence on the role of the human mind in creating or shaping reality. According to Raymond Williams (*Key Words*), this is the original philosophical sense of the term—that "ideas are held to underlie or to form all reality."

A second set of polarities has to do with the nature of truth. According to Smith, realists judge a statement to be true if it "corresponds to an independently existing reality and false if it does not" (Smith, 1983, p. 9). For idealists, no concept of correspondence is acceptable. Because any one observer's understanding exists in that observer's mind, there is no outside referent against which to test a statement of reality. Truth then becomes a matter of agreement, reached through and justified by interpretation.

These ideas of truth imply different ideas of objectivity. For the realist, objectivity may be achieved through the use of methods that permit an unbiased examination of phenomena. These methods provide what amounts to public knowledge: knowledge that can be tested by others, assuming they have similar levels of skill and use comparable methods on comparable problems. On the other hand, idealists believe that, because any concept of reality is dependent upon the mind of the observer, objectivity sought by realists is not possible. For the idealists, objectivity is "nothing more than social agreement; what is objectively so is what we agree is objectively so" (Smith, 1983, p. 10).

A fourth set of polarities has to do with the nature of goals of the two research traditions. According to Smith, the "ultimate goal of researchers in the empirical tradition is to develop laws that make prediction possible." Smith cites as an example of scientific law the statement that if a metal bar is heated, it will expand. In the social sciences, Smith points out, such absolute laws are not always possible. Rather, the goal is a statement of probability: If X occurs, then, to some greater or lesser degree, Y occurs. What idealists seek is not a set of overarching laws, but rather what Smith calls "interpretive understanding." The hermeneutic process which gives rise to such understanding demands that the investigator examine relationships among parts and the whole of the phenomenon under investigation, including the investigator's own values and interests. (Interestingly, however, many qualitative researchers, especially in literacy, state their "interpretive understanding" in broad enough terms to encourage prediction.)

In view of these differences, it would appear that investigators of one persuasion could never accept the methods or findings of those of the other. However, the distinction may not be as stark as it appears in recent bouts of polemics and in descriptions such as Smith's.

Are the two research traditions really mutually exclusive? We may attempt to answer this question in two ways. First, we might test the assumption that the traditions are mutually exclusive by taking them to their logical extremes. At the extreme, a realist would have to choose research problems on the basis of established laws. There would be no room for hypothesis development via interpretation and imagination. At the other extreme, idealists would not accept any correspondence between their ideas about speeding cars and the independently existing reality of speeding cars on a busy highway. Idealists at this extreme would have to convene a conference to reach some social agreement about when it is safe to cross the highway.

The extreme, however, is not a viable position. Researchers who use quantitative methods must use the interpretive methods of qualitative researchers in at least four areas: in problem finding, in explaining the relationships of data to claims, in theory building, and in explaining particular cases in light of established knowledge and theory.

When qualitative researchers present their observations, they must convince their audiences that their presentation is accurate and comprehensive. To meet this challenge, they explain their methods and present their observations and the contexts of those observations in meticulous detail. Even then, however, they are aware that, because reality is a construct of mind, the reality of one mind may differ from that of another. For one observer to become immersed in the culture observed, they know, does not make the resulting observations any more than the product of a single, fallible mind (witness the case of *Coming of Age in Samoa*). Therefore, the needs to explain procedures, to verify observations, and to cross-check sources become as important for the qualitative as for the quantitative researcher, and the methods are quite similar.

In addition, careful qualitative researchers understand the problems of extrapolating from a small sample, and so increase the sample size or limit their generalizations. In this, their concern is the same as that of quantitative researchers, though their methods of dealing with it may be different. If the two methodologies are inescapably linked in these ways, then making use of the linkages and allowing the methods to work together are likely to be advantageous for both.

Second, to examine the assumption of mutual exclusivity we can attempt to determine whether, in fact, the positions described by Smith or by Heap (this collection) accord with our own experience. Smith claims that realists seek laws that make predictions possible and that idealists seek agreement reached through interpretive justification. In a sense, this distinction begs the question of how the two differ. Does it mean that anthropologists never expect their results to be replicated and don't care? It seems quite evident to me that they do. For example, Miller and Sperry (1988) examined, among other verbal phenomena, the onset of narratives in three two-year-old girls from a working-class community. Later they undertook further investigations in four other communities to determine whether narratives began in similar ways. These careful ethnographic studies clearly imply predictions: e.g., that the onset of narratives about highly emotional occurrences are co-constructed with caregivers and that in different communities, they may be guided by different sets of values. (See also Miller, Potts, Fung, Hoogstra, & Mintz, 1990.) Miller provides no probability statistics, but the predictive power and apparent intent of the work is, I think, undeniable. Prediction is simply approached in a different way.

Smith (1983) and Heap (this collection) imply that realists or positivists seek certainty. Smith writes of the development of laws. However, not even the so-called hard scientists have sought "immutable laws" of the universe during the twentieth century. They have learned to live with ambiguity (e.g., the Heisenberg principle in quantum mechanics). Often in fields such as particle physics, quantum mechanics, and the measurement of chemical and thermodynamic constants, different experiments yield results that are statistically inconsistent. It is not unusual for reviewers of studies attempting to establish physical properties to eliminate 40 percent of the available studies to establish more reliable measurements (Hedges, 1987). When experiments yield significantly different results, interpretation becomes essential for positing possible explanations for the differences.

Heap (this collection) writes with certainty about the inabilities of realists to attain certainty. He cites the "frame problem" as an example to explain why. The frame problem derives from the possibility that a test taker may select an intended wrong answer as the correct one. This, Heap states, means that "when a student gets thirty-three out of fifty items correct, there can be no certainty that the student's failure to answer correctly the remaining seventeen questions is evidence of a lack of the relevant skill."[1] He is, of course, quite right about what the results do not indicate. However, standardized tests do not claim that a particular score indicates the certain lack of particular skills. Instead, they claim that the number of correct responses is equivalent to some normatively determined level of response to reading material of that kind, expressed at some level of probability or with some margin of error. Such a claim is quite different from claiming that wrong answers indicate the certain absence of some particular skill.

Further, the work of careful quantitative researchers is always reported in terms of probabilities, not certainties. Rhetoricians examining such things report that important features of scientific texts are the presence of "hedges" (Crismore & Farnsworth, 1990) and "modal qualifiers" (Butler, 1990), both means of avoiding statements of certainty and implying the necessity of interpreting results.

Both qualitative and quantitative researchers are empirical. Both are deeply concerned with representing what they observe as though those phenomena have status in some reality independent of the mind of the observer. An ethnographer of mother-child interactions would be very much concerned if another observer examining mother-child interactions in a comparable environment reported quite different kinds of interactions. The researcher would indubitably attempt to discover reasons for the discrepancies and would certainly not pass them off as simply the product of another mind that constructed reality in a different way. In the same way, when quantitative researchers in the physical and social sciences find different results coming from different experiments, they seek to understand the differences.

Although quantitative and qualitative research are not mutually exclusive, they can and do focus on different kinds of problems. For example, quantitative methods cannot deal directly with historical problems of cause and effect or the interpretation of unique social phenomena. On the other hand, qualitative researchers find it difficult, if not impossible, to represent the responses of large numbers of individuals to different kinds of stimuli, e.g., different methods of teaching or attitudes toward social conditions or political events. In the sense that the two sets of methods allow researchers to deal with problems of different dimensions in different contexts, they are complementary.

However, the methods are more than complementary in the general sense of enabling researchers to deal with different kinds of problems. They enable researchers to bring different methodologies and insights to bear on the same problem—and this complementarity is possible without the metaperspective that Heap (this collection) implies is necessary for complementarity but argues is impossible. Heap states, "there can be no single metaperspective that would allow us to judge and articulate the claims of all the disciplines that study literacy. There can be no such metaperspective because there is no single conception of science that each relevant discipline shares." Undoubtedly, Heap is right in saying that widely differing disciplines share no single conception of science. At the same time, however, no single conception of science is necessary for differing research methodologies to be used successfully in a complementary fashion.

Even within a single discipline, it is easily demonstrable that practitioners use quite different methodologies. Astronomers, for example, can specify methods for describing and measuring the motion of planets and comets around the sun. However, they cannot specify methods for inferring the existence and nature of gravity. In other words, astronomers use these two quite distinct methodologies (measurement and interpretation) in an entirely complementary fashion. The findings or claims of different methodologies are synthesized by the use of ordinary argument. Although the methods used to derive different claims may be in conflict, the claims themselves are not—or at least not necessarily.

A complex argument involves a series of claims, used in a variety of ways to support a major proposition—which is the point of the argument. The minor claims are of different types, by virtue of being based on different evidence tied to the claims by different kinds of warrants. For example, the proposition that Mr. Zee is guilty of speeding at 55 mph in a 35-mph zone is based on three different claims, each based on a different set of evidence tied to the claim by a different kind of warrant. The claim that Mr. Zee's car was traveling at 55 mph is based on the evidence of a radar reading. The radar reading in itself, however, does not mean that Mr. Zee was actually traveling at 55 mph. In addition, the argument requires information about the reliability of the radar reading, its margin of error, and so forth. The information about the radar instrument itself serves as a warrant which ties the evidence (the reading of 55 mph) to the claim that Mr. Zee was traveling at that speed. A second claim is that Mr. Zee was in a 35-mph zone at the time the reading was made. The evidence underlying this claim has to do with the actual boundaries of the 35-mph zone and the arresting officer's interpretation of the position of the speeding car in relation to the zone. The warrant which ties the evidence to the claim that Mr. Zee was in the 35-mph zone has to do with the veracity of the arresting officer. Finally, the claim that the speed limit was 35 mph is based on statutory evidence. The warrant tying the statutory evidence to the claim about the speed limit in a particular zone involves interpretations of the statutes, precedents, or both. Although each of these minor claims rests upon its own evidence and warrant, each different from the other, each claim plays a necessary but complementary part in the larger argument which results in a fine for Mr. Zee.

Similarly, the claims derived from quite different research methods can be used in a complementary way to establish or disestablish propositions and theories. For example, considerable experimental evidence indicates that certain kinds of student-led small-group discussions (collaborative learning) can have a powerful impact on individual writing when the students work together in those discussions to solve problems parallel to those they will confront in their individual writing (Hillocks, 1986). Comparison of these results to those obtained through relatively unstructured response groups, individual conferences, or teacher lecture indicates that the structured small-group discussions are on the order of three to four times more effective than the other methods (Hillocks, 1986, p. 203).

Although the evidence from these studies is quite strong for cognitive growth, and although the kind of cognitive growth can be inferred from the writing of students in the studies, the quasi experiments provide virtually no information about how growth takes place. Research currently under way (supported by a grant from the Benton Center for Curriculum and Instruction, the University of Chicago) makes use of classroom observations and audiorecordings of classes and small-group discussions to examine the processes in small-group discussions that may be responsible for the change in students' thinking and writing. Preliminary examination of the data indicates that the processes strongly evident in certain types of student-led discussions recur in talk-aloud protocols when students are writing independently, and show up as results in independent writing. Even if the results turn out differently than expected, this ethnographic-type data will have provided insights simply unavailable through the experimental data allowed.

An ardent qualitative researcher might argue that we had no need for any of the experimental kinds of data at all. Such a person might argue that the main study should have examined the situated student-led small-group discussion in the first place. Such is not the case, however. Most of the quantitative studies supply explicit enough discussions of the instructional methods in both the experimental and control treatments to allow reasonably strong inferences about the tested results. In addition, across several studies the effect size of experimental treatments (versus that of control treatments) is homogeneous, providing an unusually strong generalization about the effects of this kind of treatment. The study of small groups alone, while possibly capable of indicating the effective instruction, could not carry the weight of generalizations developed across large groups of students. Taken together, the two kinds of studies provide far richer and more convincing findings than either could have alone.

That certain concerns and methods are inescapably shared and may be used profitably together does not obviate the contradictory assumptions about the existence and nonexistence of an objective reality. But contradictory assumptions exist in the hard sciences, too. Some physicists, for example, have accepted a wave theory of light, while others accepted a particle theory. Certain experiments verified one theory, while other experiments verified the other. More recently, physicists have recognized that the two may be more appropriately seen as different explanations of the same phenomena, based upon different assumptions underlying the experiments used to verify them.

Is it not possible that our divergent assumptions about objective reality simply represent different metaphors about our relationship to reality, and that both have validity under certain sets of conditions? It is useful to think of reality as objective, particularly when we deal with sensory experience that can be observed repeatedly under different conditions, even though we must allow and test for the fallibilities of perception. We could not live our daily lives without this assumption. On the other hand, when our concerns involve chains of inference (as in language learning), then it is imperative to remember that our minds mediate reality, that even though two observers begin with quite similar sensory perceptions, their chains of inference may lead to quite divergent representations of their observations.

In research on literacy it is important both to establish what appears to be objective and to interpret those facts—to give them meaning. Given those demands, we cannot in good conscience reject either set of assumptions or methods. We need both to accomplish the tasks before us.

Note

1. Heap goes on to say that "there is no way of calculating a margin of error" for such items. In fact, it is possible, using Rasch model analysis which provides person and item measures, fit statistics, and standard errors for items. Rasch model analysis provides a means of identifying items of the kind Heap objects to (Wright & Stone, 1979).

References

Butler, C. S. (1990). Qualifications in science: Modal meanings in scientific texts. In W. Nash (Ed.), *The writing scholar: Studies in academic discourse* (pp. 137–170). Newbury Park, CA: Sage.

Crismore, A., & Farnsworth, R. (1990). Metadiscourse in popular and professional science discourse. In W. Nash (Ed.), *The writing scholar: Studies in academic discourse* (pp. 118–136). Newbury Park, CA: Sage.

Hedges, L. V. (1987). How hard is hard science, how soft is soft science? The empirical cumulativeness of research. *Journal of the American Psychological Association, 42,* 443–455.

Hillocks, G. (1986). *Research on written composition: New directions for teaching.* Urbana, IL: National Council of Teachers of English.

Miller, P. J., & Sperry, L. L. (1988). Early talk about the past: The origins of conversational stories of personal experience. *Journal of Child Language, 15,* 293–315.

Miller, P. J., Potts, R., Fung, H., Hoogstra, L., & Mintz, J. (1990). Narrative practices and the social construction of self in childhood. *American Ethnologist, 17,* 292–311.

Smith, J. K. (1983). Quantitative versus qualitative research: An attempt to clarify the issue. *Educational Researcher, 12* (3), 6–13.

Williams, R. (1983). *Key words: A vocabulary of culture and society.* New York: Oxford University Press.

Wright, B. D., & Stone, M. H. (1979). *Best test design.* Chicago: Mesa.

II Disciplinary Perspectives and Methodological Approaches

5 First, Catch the Rabbit: Methodological Imperative and the Dramatization of Dialogic Reading

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> It is astonishing how rarely attempts at 'testing' psycho-analytic theory have confronted the question of a possible incompatibility between some of Freud's theoretical assumptions and those necessary for the constitution of the empirical domain in which the testing is to take place. (Danziger, 1988, pp. 91–92)

> Language and speech communication (as a dialogic exchange of utterances) can never be identical. Two or more sentences can be absolutely identical . . . But as an utterance (or part of an utterance) no one sentence, even if it has only one word, can ever be repeated: it is always a new utterance. (Bakhtin, 1986, p. 108)

This chapter begins in 1976, when Vipond was a postdoctoral student at the University of Colorado. Another visitor to Boulder, James J. Jenkins, asked what the subject of his doctoral research had been. The project had been to extend the lexical ambiguity effect to paragraph comprehension, but, Vipond said, problems had arisen when he couldn't replicate the effect. Jenkins observed, "So, you don't have a phenomenon," and asked if Vipond knew the recipe for rabbit stew. We've given it in the title of this paper.

Here we want to discuss some reasons researchers may find it hard to catch their particular rabbits. Because we are so familiar with it, we will use as an illustration some of our own research on point-driven or dialogic reading. We spent six years trying in vain to catch this rabbit, perhaps—or so it seems now—simply because we hadn't been looking in the right ways. Unlike Dryden's Diana, whose "chase had a beast in view," we chased a quarry that we continued, on the basis of our experience as readers, to believe must exist—but of which we could find precious little evidence. To understand why, we will draw first on the work of psychologist Kurt Danziger, whose notion of the "methodological imperative" in psychology suggests that researchers too often allow methods to dictate to theory how research is to be done. Still following Danziger, we will question the assumption that the purpose of research is the testing of theoretical claims. Testing is a worthy function of research, but it is far from the only one. Using Danziger's term, research can also serve to "dramatize" a theory in order that its implications can be explored. When a theory is dramatized, one can learn things one did not expect. In this case, the dramatization gave us a new sense of the importance and place of *dialogue* in research as well as in reading itself. To make clearer the role we found dialogue playing in our studies, we then turn to the language theories of Mikhail Bakhtin.

Some Background

We started working together because each of us was dissatisfied with his own discipline. Hunt wanted to understand better why students in English literature classes read and wrote as they did. Traditional literary studies and literary criticism (even reader-response criticism) were not much help, so during a sabbatical in Indiana he read as much as he could in cognitive and developmental psychology, semiotics, and educational theory, believing that insights from these disciplines could be used to understand his students' behavior. Vipond, meanwhile, was moving in the opposite direction, from cognitive psychology toward literary issues. He was trying to extend work on text comprehension to literary texts, because there seemed to be important aspects of reading and response that were being missed by the paradigm he was then working in (read a short paragraph and then free-recall it).

Vipond's sabbatical in 1983–84 seemed a good opportunity for us to collaborate. The plan was to use some *methods* supplied by cognitive psychology (Vipond) to study some *problems* raised by literary studies and rhetoric (Hunt). Empirical and quantitative methods had helped bring about genuine advances in understanding human information processing; it should be possible, we thought, to apply these methods to the problem of what happens when people read literary texts. Although the line between Hunt's and Vipond's expertise quickly blurred (very early we began horning in on each other's territory), what did not become blurred was the central idea that the methods of psychology could be used to test the ideas of literary study.

Intuitively, it appeared that experts read literary texts in a way that psychological studies of text processing did not illuminate very well.

Because those studies used what Robert de Beaugrande (1982) attacked as "fragmentary and inane" texts, they limited themselves to considering reading according to a simplistic "conduit" or "transfer-of-information" model (Reddy, 1979). Such studies tested theories about how information is acquired from text by making statistical inferences from the performance of large numbers of subjects working with simple texts. For instance, experimenters would identify certain text features and determine whether manipulating those features reliably influenced what readers could remember. The problem was that these studies seemed to have, at best, only peripheral implications for the more complex "literary reading" that we were interested in.

By focusing attention on a different set of texts and theories, we planned to turn the old methods to new purposes. We wondered what would happen if literary texts were substituted for the simple or artificial "textoids" traditional studies employed. What would happen if theories drawn from rhetorical, reader-response, and poststructuralist literary theory were substituted for the information-processing theories underlying traditional studies? What would it mean to consider literary reading from the vantage point of "story" and "discourse"—the Russian formalist distinction that we had discovered by way of Seymour Chatman (1978)? Finally, we wondered what we would find if we looked for the types of reading described by Louise Rosenblatt (1978), who suggested that there are two quite different kinds of rabbits out there: one type ("efferent") concerned with acquiring information from text, and the other ("aesthetic") concerned with the lived-through experience of engaging in a transaction with a text.

Four Studies

Study 1: Branching Text

In 1983–84, partly as a result of an extended discussion of undergraduates' recognition of irony and ironically compromised narrators (Booth, 1961), we carried out a series of what we called "branching text" studies. We were trying to see if there were a causal relationship between readers' sensitivity to "narrative surface" and their "aesthetic" response. ("Narrative surface" is what Chatman calls "discourse"—matters of tone and point of view as opposed to story events.) We reasoned that if readers could be induced to pay greater attention to narrative surface, they should be more likely to respond aesthetically rather than simply reading for information or events. Obviously, we needed a way to induce attention to discourse, a way to check that it had been induced, and a way to see if and to what extent readers engaged in aesthetic rather than efferent reading.

These seemed to be straightforward problems. We asked university students, as part of their first-year English classes, to read John Updike's "A & P." "A & P" is narrated in the first person by Sammy, a nineteen-year-old grocery store checkout clerk. The experimental group of readers had a task intended to make them more aware of the story's narrative surface. At two places in the story these readers were given three parallel paragraph-length continuations. The three continuations, or "branches," were virtually identical in terms of story events, but they differed in tone and point of view. The first branch was consistent in both tone (colloquial) and point of view (first-person) with the rest of the story; in fact, it was Updike's original version. The second branch varied in tone but not in point of view: it was narrated by a first-person protagonist whose tone was formal (as opposed to Sammy's racy vernacular). The third branch varied both tone and point of view: it described the events from the point of view of an uncharacterized third-person narrator.

Readers in the experimental group were asked to rate the branches, on a seven-point Likert scale, for appropriateness with the rest of the story, whereas readers in the control group did not see the alternatives—they were merely asked to think about the story for a few moments at those places. Near the end of the story there was a final set of branches, and this time all readers were asked to make appropriateness ratings. The experimental readers, by virtue of having been encouraged to attend to the text's narrative surface in the first two sets, were expected to demonstrate greater perception of surface—that is, higher ratings for Sammy—on the third set.

Afterward, all readers were given a set of statements (or "probes," as we came to call them) that other readers had allegedly made and asked to rate their agreement with each statement on a seven-point scale. They also had the option of making written comments on each statement. One of the statements was what we took to be a reasonable "point" for the story. The rating on this critical item was thus taken as indicating the degree to which the reader had constructed a valid point for the story; that is, had read the text with some attention to aesthetic values rather than as a mere exercise in recall. (At that time, evidently, we were bold enough to rush in—where now we might fear to tread—and say what a valid point for the story was.)

For reasons that needn't concern us here, we ended up with fourteen students in the experimental (branching) group and seventeen in the control group. Of greater concern is the way we thought about the experiment and the data it generated. The ratings on two sets of seven-point scales were subjected to analysis of variance (ANOVA), with *group* as a between-subjects variable. The *F*-tests, however, were statistically nonsignificant: readers in the experimental group did *not* rate the Sammy branch as more consistent than did the control readers, nor were the experimental readers more likely to agree that our point was an appropriate one for the story. And, in several subsequent studies, the *F*-tests remained nonsignificant even though we increased the number of readers (to fifty-one) and the number of branches (to five), reduced the length of the branches (now called twigs), gave feedback after each one, altered the probes, and so on.

We were taken aback. We had thought the rabbit in question was an obvious, public phenomenon, but there was absolutely no sign of it in our trap.

And yet we had done something right. There was space at the bottom of each scale for written comments, and some readers had used it. From their comments we learned something that the ANOVAs didn't tell us; namely, that most of the students heartily disliked "A & P." Typical reactions were "dumb," "stupid," "boring," "choppy." Again we were surprised. Our expectation—presumably shared by the many editors of classroom anthologies who include the text—was that "A & P" is the type of story undergraduates should find engaging. Nevertheless, it was only when we began seriously to ask why the story was so deeply disliked that we began to think that our students were not reading it as though they expected it to have any relevance to them. Instead, they appeared to be reading as though their aim were to remember the information in the story, or to follow the sequence of events.

Neither of these stances toward "A & P" seemed to have much to do with the strategies we ourselves, and other readers we knew, used when reading the story—for instance, expecting relevance and coherence, and distinguishing between Updike's purposes and Sammy's. After rereading some work on "point" by sociolinguists such as Livia Polanyi and William Labov, it began to seem that the students' responses might be better accounted for by positing not two modes of reading, as Rosenblatt did, but *three*. We called these story-, information-, and point-driven modes, and suggested that reading a text in a mode it doesn't "afford" (Gibson, 1979) might result in the sort of disappointment or even anger voiced by some of our readers.

Interestingly, though, when we first wrote about point-driven understanding in *Poetics* (Vipond & Hunt, 1984), we didn't have much evidence for it among our student readers. The discussion was almost entirely speculative, based on our intuitions about how we ourselves read "A & P" and our guesses as to how critics must have read it. Clearly, the branching text studies had not produced point-driven reading. Thus we found ourselves in the awkward position of trying to study a phenomenon we couldn't find. We had a new theory, but, so far, no rabbit.

Study 2: Letter Frame

It now seemed that what was wrong with the branching text studies was that they were too subtle. We had tried to produce aesthetic reading through the mediating influence of narrative surface, but our readers didn't seem to notice. So we shelved the idea that attention to narrative surface causes aesthetic reading. What seemed much more immediate, in any case, was to find some way to test the new hypothesis about the three modes of reading. To do this we decided to use different orienting tasks to induce the three modes. Again we conducted a series of studies that would yield quantitative data.

In the first, we had seventy first-year university students read three short stories (two by Hemingway, the other by Maeve Brennan), but this time they did so under different task conditions (the task was repeated after each page of reading and was constant for a given reader): (a) to induce information-driven reading, some readers were asked a factual question after each page; (b) to induce story-driven reading, others were asked to predict what might happen next; and (c) to induce point-driven reading, other readers were asked whether they saw any connections developing between the story and a framing letter they had been shown before reading. (The letter was one in which the letter-writer recommended this story to someone else because it illuminated the letter-writer's situation; the ongoing question for our readers, therefore, was, "Are you beginning to see why the letter-writer recommended this particular story?") These task conditions, we expected, would affect the stances readers took toward the texts. Although the tasks wouldn't affect all readers the same way, our methodological assumptions led us to expect that some aggregate differences would be visible among the three groups.

ANOVAs were conducted on each of the several dependent measures in this experiment. Task effects were found only for the reading time scores: the readers asked information questions were slowest overall and those asked story questions were fastest, but only the letter-frame group slowed down significantly over the last few pages of the story. Other dependent measures, notably recognition test scores and agreement ratings on probes, did not show a task effect. Nevertheless, we were encouraged by the reading time results, which we took to indicate that there are indeed processing differences between readers who are trying to construct a point and readers who are trying to retain information or follow the story. Thus we took these data as a warrant to continue our research, even though, in retrospect, they are only indirect evidence of the different modes. Perhaps now we had seen a few tracks, but the elusive rabbit was still nowhere to be found.

If there were processing differences between these modes, what were they? At about this time we began taking more seriously sociolinguistic work on the structure of conversational narratives. Livia Polanyi (1985) and William Labov (1972) argue that such narratives achieve their interpersonal effects by means of their *evaluation structure*. We understood "evaluations" as incongruities with the local norm of the discourse, by means of which interlocutors are invited to share the speaker's attitude toward an event, character, or idea. We saw important analogies between sociolinguistic analyses of conversational narratives and ours of printed, literary texts. Eventually (in 1986) we came to a definition of three distinct types of evaluations in literary texts, and to the hypothesis that point-driven readings should show the kind of sensitivity to evaluations that characterize listeners to conversational stories.

Meanwhile, we were planning a more elaborate experiment that would test some of these developing ideas. This time we used just one story in two versions (the original and one with many of the textual evaluations eliminated), two tasks (frame and story), and two modalities (oral reading and silent). Thus the design was a 2 × 2 × 2 factorial, with twelve undergraduate readers in each of the eight cells. The independent variables in the resulting ANOVAs were version, task, and modality. We also had twelve faculty members participate in the study as a reference group. Seven different dependent measures were used, many of them in an attempt to find effects due to evaluative language. In contrast to the previous experiment, readers given the frame task did not show a different pattern of reading times. There were, however, small but statistically reliable differences on the probe-agreement scores. Readers given the frame task answered in what seemed a more point-driven way than the story-task readers, and the twelve faculty members responded in a more point-driven way than the comparable group of undergraduates.

Besides the paper-and-pencil measures, readers were asked open-ended oral questions such as, "What do you make of this story?" "Do you like it?" "What do you (dis)like about it?" Responses to these questions, we assumed, had to be translated into a numerical format that would allow them to be analyzed statistically. Accordingly, the responses were treated as if they were statements in a verbal protocol (Ericsson & Simon, 1984): complex statements were decomposed into simpler ones, and the simple statements were coded according to whether they were primarily comments on plot, author, character, text, and so on. Chi-square analysis showed that faculty members made significantly more author, theme, and style comments, whereas students commented more often on plot. (We compared students from all eight treatment conditions with faculty members because the students' responses didn't vary much from one condition to another.) We took these results as evidence that the faculty members read in a relatively point-driven way, compared to the students' preference for story-driven mode. The evidence for point-driven reading, however, was still quite indirect. If there were a rabbit here, it wasn't the obvious one we were looking for.

Study 3: Social Reading

To summarize so far: we had tried to produce aesthetic reading by encouraging readers to pay attention to narrative surface, but the branching text exercise simply didn't work. Next we tried to produce point-driven reading by giving people, before reading, a context or frame and asking them during reading to relate the story to the frame. Relative to other task conditions, the letter-frame task produced differences in reading times and agreement ratings with probes, but the differences were small and inconsistent across experiments.

Once again we were confronted with the problem of why a phenomenon that intuition told us was common and obvious should be so difficult to find. Turning again to the analogy with conversational stories, we reasoned that point-driven reading may be thought of as an interpersonal phenomenon, like point-driven listening in a conversation. Participants in conversations expect to be able to construct points precisely because the narrator is right there as a warrant that the story is potentially relevant to the situation—that is, they expect a "tellable" story. A written text, however, offers only a theoretical equivalent of such a warrant, and the experience of many readers leads them to expect that written stories are *not* always tellable.

It seemed that a point-driven reader might be acting like a point-driven listener; that is, such a reader might construct a notion of the text's author, who acts as a warrant that the text being read is potentially relevant to the situation. According to this analysis, the problem with our manipulations was that they were just make-believe. If we wanted readers who wouldn't otherwise do so to treat text as the product of an intentional author, giving them yet another (equally unwarranted) text was hardly likely to be effective. Suppose, though, we manipulated the situation by having the reading take place in an actual interpersonal setting? If readers had an authentic interpersonal motive for reading, perhaps they would be more likely to read in a point-driven way.

Together with our student Lynwood Wheeler, we had sixty-eight undergraduates look over three short stories and choose one to work with further. The students then read the story they had selected either to a person who hadn't heard it before (this was the social reading condition), or else they read it aloud into a microphone, expecting to receive a comprehension test later (nonsocial reading). Dependent measures included the quality of oral reading, as determined by miscue analysis, and agreement ratings with probes. The social readers were expected to be more point-driven because they were reading a story they had chosen to someone who hadn't heard it; but as it turned out, it was the nonsocial readers who, according to the probe scores, had read in the more point-driven way. Thus, far from producing greater incidence of point-driven reading, the social manipulation had produced less. Our rabbit seemed further away than ever.

Study 4: Discourse-Based Interview

By this time we were beginning to wonder whether we weren't imagining the whole thing. After three or four years of study, still the strongest evidence for point-driven reading was our own intuitions. On the basis of our felt experience we still thought we knew what "literary reading" ought to look like. But we couldn't seem to get it into our lab in order to find out more about it. As Jenkins might have asked, where was the phenomenon? In a kind of desperation, therefore, we decided simply to see if we could get some clear, convincing examples of point-driven reading.

So this time we wouldn't try to *produce* point-driven reading. Instead we would try to create conditions so favorable that if there were such a beast, it would appear. (And, of course, we would be waiting, with the tape recorder turned on, to catch it if it did.) What would be the ideal conditions? Like Rosenblatt, we had been saying for some time that aesthetic reading is a transaction between *text* and *reader* that is shaped by the particular *situation* in which it occurs; thus it was necessary to pay attention to all three components. Accordingly, we chose texts that seemed to afford point-driven reading (and for the first time used nonfictional as well as fictional texts). We chose readers from a range of educational levels: first-year undergraduates, as usual, but this time equal numbers of fourth-year undergraduates and faculty members as well. (Since we planned to study each reader in some detail, we were content to have only five readers in each group.)

But what we changed most of all was the situation. True, the physical environment was much the same (the reading still occurred in a basement lab at the university), but the tasks the readers performed, and the type of data collected, were very different. The first difference was that instead of giving the readers photocopies of the texts they were to read, they were handed an actual, published copy of each text. The second was that whereas before the readers had performed various tasks with respect to the texts, this time they were engaged in an intensive interview—a "guided conversation" (Lofland & Lofland, 1984, p. 59)—about each text. Following Odell and Goswami (1982; see also Odell, Goswami, & Herrington, 1983), this interview was "discourse-based," meaning that the reader was shown sentences from the original text along with alternatives that we had composed. For each alternative, the reader was asked whether it would make a difference if the new phrasing were substituted for the original, and if so, what kind of difference it would make. By composing the alternatives ourselves we were able to highlight issues of interest, with the added advantage that literary nomenclature didn't have to be introduced. (For example, in some cases we replaced metaphoric language with prosaic language. Some readers thought that much was lost, whereas others said that the prosaic alternative, because it was easier to understand, was an improvement on the original.) In each case, however, the alternatives were treated as occasions for talk.

After the discourse-based interview, the readers responded, as in previous studies, to probes we had devised for each text. But this time instead of converting the responses to numbers on a Likert scale and then determining by ANOVA whether there were statistically reliable between-group differences, the probes were occasions for still more talk.

More than 700 pages of transcript resulted. We did not attempt to analyze the corpus into codable statements. Instead we read and reread the transcripts, looking for clear instances of the kind of reading we had been calling point-driven. We were now, taking the idea from Bakhtin's (1981) insights about the status of literary texts, beginning to think of it as "dialogic." That is, as explained more fully below, we were moving still further away from the notion of "point" as a specific, unitary—and perhaps unproblematic—phenomenon that a story might in some sense "have," and thinking of it even more as a process of establishing relationships between people by means of texts. In this sense, our conception of the rabbit's nature was shifting, at least slightly, as our investigation continued.

When we did find instances of dialogic reading (and information- and story-driven modes, too), we tried to account for them by the specific conjunction of reader, text, and situation. In doing this, we learned some new, and perhaps surprising, things about the rabbit.

For example, we learned that people who read dialogically often expect to be able to "converse with" and continue to refer to the text after the immediate reading is finished; they talk about passing texts on to others; and they are more likely to connect what they read to their own knowledge and concerns. (The most dramatic instance of connecting reading to experience: two of our readers had actually met one of the authors used in the study, but one made no connection between the stories handed him and the fact that he heard the author read similar stories in a class the previous term.) Dialogic reading seemed to be more prevalent for some texts than for others, and clearly was engaged in more by the faculty members than by the students. For a fuller discussion of some of the things we learned, see Vipond, Hunt, Jewett, and Reither (1990), and Hunt (1989).

In other words, it was our sense that finally we had a rabbit and were in a position to learn some new things about its character and habits. For the first time we had, in a recognizable form, the phenomenon itself. The question, of course, is why did it take so long?

The Morals of the Story: Alternative Views

Like all stories, the one we've just told can be read in different ways. It might be read, for instance, as a tale of two hard-nosed experimentalists who eventually saw the light and turned into warm-hearted humanists. The studies that began as experiments, committed to quantification and statistical inference, evolved toward smaller-scale projects in more "natural" situations, with an acknowledgment that the data did not necessarily have to be quantified but were to be understood and interpreted as discourse. It might be suggested that we are now studying "everyday" as opposed to "laboratory" reading, and understanding it qualitatively instead of quantitatively.

There are a number of problems in reading the story this way, however. As George Hillocks, Jr., notes (this collection), realist (quantitative-artificial) and idealist (qualitative-natural) approaches are not the polar opposites they are often made out to be. Instead, they are better seen as complementary metaphors; each informs the other, and we need both. Another problem is that there seems to be an implicit value hierarchy (one we do not share) in such a scheme; it's far too easy to see the bad guys as either the "number crunchers" or the "storytellers." We would not derive the moral that quantified, "artificial" experiments are bad whereas qualitative, "real-world" studies are good. As Douglas Mook (1983, 1989) argues, external validity is not necessarily a requirement in research—for some purposes, quantified experiments done in completely "unnatural" laboratory settings are precisely what is needed, because they provide answers to questions posed by theory.

But if the quantitative/qualitative scheme cannot account for the story of failure and success we have told, what *is* it about? In the remainder of this paper we will discuss two different though related accounts. In keeping with our different disciplinary backgrounds, one derives from psychology (in particular, Kurt Danziger) and the other from literary theory (Mikhail Bakhtin).

Danziger and the Methodological Imperative

In "The Methodological Imperative in Psychology" (1985), Danziger considers the relationship between psychological theory and rules of evidence. How are theories to be tested? "In this discipline it is generally assumed without question that the only valid way to test theoretical claims is by the use of statistical inference" (p. 3). According to Danziger, statistical inference is so pervasive that it not only dominates design considerations but works back to data collection procedures themselves: one collects data of a type that can be handled by statistical inference. (We would add that the effects of statistical inference sometimes extend even further back than that, to a researcher's earliest ideas about doable experiments.)

So what's the issue? The problem is that the assumptions made by the psychological theory one is testing may not be congruent with the assumptions of the system that is being used to test it. Specifically, theories (in this case, theories of reading, but as Danziger points out, many others as well) are often theories of individual functioning, whereas statistical inference requires group or aggregate data, ideally with large numbers of subjects. Given inconsistency between theory and method, there is no intrinsic reason why either one should dominate the other. Historically, however, methods have enjoyed higher status than theories; theories have been seen as idiosyncratic and subject to irrational impulses, whereas methods have been seen as universal and rational (Danziger, 1988, p. 87). Thus the problem of inconsistency between theory and method has usually been resolved by accommodating theory to method. The methodological imperative in psychology is thus double-edged: it means not only that statistical inference has been taken as the one legitimate way to test theories, but that theories themselves have come to be constructed in the image of the method. Danziger coins the term "methodomorphic theory" as a shorthand description of this state of affairs (1985, p. 9).

Where does this leave theories that have been developed outside the influence of the dominant methodology? This question is relevant to our own work, because the theoretical claims we wish to make about point-driven or dialogic reading have no obvious compatibility with the demands of statistical inference; we were not, that is, trying to develop a model of group (aggregate) functioning. Danziger cites Wundt, Freud, Köhler, Wertheimer, Piaget, and especially Kurt Lewin as examples of psychologists whose theories were developed outside the "charmed circle" of statistical inference. Because the assumptions of statistical inference are incompatible with these psychologists' theoretical assumptions, the methods cannot claim to be neutral with respect to their theories. Consequently, to test the theoretical claims of a Freud, a Piaget, or a Lewin by means of statistical inference means that the theories are going into the test situation with an "absurd handicap" (Danziger, 1985, p. 7).

Let's reconsider our first three studies in light of Danziger's analysis. We did assume "without question" that the only way to test our theoretical claims was to devise tasks that would yield numbers; these numbers were necessary because they are required by statistical inference procedures, preferably ANOVA. So no matter what problem was being investigated, it was an unacknowledged requirement that the study yield numbers amenable to statistical analysis—reading times (in seconds), agreement ratings (on a 1–7 scale), percent meaning-preserving miscues, and so on. At the same time it was a built-in requirement that the number of readers per experiment be fairly large. Thus the branching text experiments used from thirty-one to fifty-one readers; the letter-frame experiments used seventy to ninety-six; and the social reading experiment used sixty-eight.

In retrospect, it appears that we didn't question whether it was *appropriate* to test claims about point-driven reading by ANOVA-driven experimentation. Statistically significant results obtained by means of ANOVA are persuasive—that's all we needed to know. What we didn't notice at the time was that the assumptions made by statistical inference may have been incompatible with our theoretical assumptions about reading. The most important of these assumptions is that reading is a transaction between reader and text, shaped by situation. Because readers are different, and because they represent texts and situations differently, there are likely to be wide individual differences in response. Statistical inference, however, is intolerant of individual variation within a treatment condition: it is mere "error variance"; consequently the chances of finding overall, group differences among the various treatments was diminished. It could be said that what we were really looking for was what Stephen Jay Gould calls "historical explanation," but our methods were giving us "experimental results" (1989, p. 278).

In any event, either the theory or the method had to yield. Given the methodological imperative, it was perhaps inevitable that it was the theory that gave ground. Thus, not only did the theory of literary reading enter these experiments with an "absurd handicap," but what was even more absurd was that we had handicapped ourselves. We began to appreciate why the rabbit stayed away.

Whether Vipond and Hunt test their theories by the "right" or "wrong" methods may not be a question of universal significance, but it is worth trying to understand how we, and psychology in general, got into a situation where theories are tested unfairly by transforming them into methodomorphic mutants. Largely, Danziger suggests, it is because the relation between theory and method has been conceived too narrowly. We need to reexamine the notion that the only reason for doing experiments is to test a theory. Although the testing function is one possible relation between theory and method, it is a more limited one than we have been led to believe. There are other functions that methods may serve. In particular, Danziger draws attention to the *demonstration* or *staging* function of methods, in which "a particular methodology [may be used] to construct a working model that demonstrates the theory in action" (1988, p. 92).

For example, neither social psychology experiments nor psychoanalytic sessions provide formal, logical tests of their respective theories; rather, they provide applications of "dramatizations." Thus, when Stanley Milgram conducted experiments on destructive obedience he was not attempting to test specific theoretical claims (Miller, 1986, p. 45). Milgram's experiments were instead *demonstrations* of the power of situations over behavior, and nearly thirty years later they still function as exceptionally vivid dramatizations of his theoretical claims.

Returning to our own work, it's now possible to see more clearly why Study 4, the discourse-based interview, was finally successful in catching the rabbit. Dialogic reading is a form of social interaction; in order to test it, situations need to be created that will allow it to exist. The social situation of Studies 1–3 did not afford dialogic reading, whereas the situation of Study 4 did. In that study dialogic reading was not "tested" but dramatized, demonstrated in action. Pushing the dramatization metaphor even further, we could say that in this study a stage was set; participants ("actors") invited onto it; props (texts) supplied. One of the actors, the interviewer, had a rough script to work from; beyond that it was a matter of controlled improvisation. Perhaps one reason the dramatization was effective is that nothing else got in the way. In particular, when we set up the study we made no attempt to provide for the collection of numbers; in Danziger's terminology, we did not impose any kind of numerical ordering on the empirical domain being studied. In this case, therefore, and for the first time, statistical inference did not call the shots.[1]

In short, what we ended up doing was studying dialogic reading by staging studies as dialogues. The word *dialogic* brings to mind the name of Bakhtin, and it's to a Bakhtinian account that we now turn.

Bakhtin, Text, and Utterance

Bakhtin's dialogism—especially when he is considered a literary theorist rather than a philosopher of language—is often taken to be a position from which critics can see aspects of literary texts not noticed before: their many-voicedness, intertextual richness, heteroglossia. But there is a further implication of Bakhtin's ideas, one that is clearer in works such as *Marxism and the Philosophy of Language* (1973) and *Speech Genres and Other Late Essays* (1986)—works that are not always seen as relevant to literary theory. This implication helps us understand what it might mean to read a literary text in an engaged way, and what it might mean to try to understand that engaged reading. It extends the dialogue outside the world of texts to include actual readers and writers.

> The fact is that when the listener perceives and understands the meaning (the language meaning) of speech, he simultaneously takes an active, responsive attitude toward it. He either agrees or disagrees with it (completely or partially), augments it, applies it, prepares for its execution, and so on. And the listener adopts this responsive attitude for the entire duration of the process of listening and understanding, from the very beginning—sometimes literally from the speaker's first word. . . . Any understanding is imbued with response and necessarily elicits it in one form or another: the listener becomes the speaker. (Bakhtin, 1986, p. 68)

Even when overt responses are delayed, Bakhtin insists, understanding is actively responsive:

> Sooner or later what is heard and actively understood will find its response in the subsequent speech or behavior of the listener. . . . Thus, all real and integral understanding is actively responsive, and constitutes nothing other than the initial preparatory stage of a response. (1986, p. 69)

In parallel with our own assumption that conversational patterns can illuminate reading ones, Bakhtin asserts flatly that "everything we have said here also pertains to written and read speech, with the appropriate adjustments and additions" (1986, p. 69). Further, as though to make certain that we do not bracket out "literary" texts as exceptions, he says that forms of utterances "are extremely diverse in compositional structure, particularly in size (speech length)—from the single-word rejoinder to a large novel" (1986, pp. 81–82).

Bakhtin's distinction between *utterance* and *text* is central here (and not to be confused with David Olson's more recent and better-known distinction; cf. Lotto, 1989). The difference for Bakhtin lies not in any characteristics of the discourse itself, but rather in how it functions. A text becomes an utterance when it is used; the same text may constitute quite different utterances in different situations. Bakhtin offers the sentence as an example of text:

> The sentence as a unit of language, like the word, has no author. Like the word, it belongs to *nobody*, and only by functioning as a whole utterance does it become an expression of the position of someone speaking individually in a concrete situation of speech communication. (1986, pp. 83–84)

There are, to be sure, differences between oral and written discourse, but we ignore their similarities at our peril. If we begin, for example, with the assumption of unidirectionality—that texts have predictable consequences in readers—we're in methodological trouble. But we're in just as deep trouble if we assume that texts and readers conduct their transactions in pretty much the same ways irrespective of the "concrete situation of speech communication." And we're in particularly deep trouble if we don't notice that some readers are more at the mercy of situation than others, that some are able to exert more control than others over the way in which they construct the situation. It's a common observation among literature teachers that literary texts "create their own context"—and, as a text-centered shorthand, it's true. But, in any given situation, it's not true for all readers.

The most important single fact about a "concrete situation of speech communication'' is that it is socially constructed. When the situation affords it, and a reader or listener takes a text as an utterance, it becomes a move in a dialogue. If the reader sees the text as an utterance in one dialogue, the reader will tend to expect certain kinds of things from it; if it is seen as a move in another, quite different, dialogue, the reader will expect different things from it. In other words, what a given reader does is affected as much by how that reader sees the text as framed by an ongoing dialogue as it is by anything we may be able to identify as ''text characteristics.'' And it is what the reader does that determines the shape of the most fundamental kinds of connections or inferences that will be constructed on the basis of the text. In brief, what that reader does will be profoundly influenced by how she or he constructs the situation and the text's role in it.[2]

All this has consequences for the methodological story we've been telling. If we look back at the early experiments (Studies 1–3) from this standpoint, some data that made little sense at the time come into clearer focus. Virtually none of our undergraduate readers of ''A & P,'' for example, took the story as an utterance in a dialogue between them and us about the values we saw in the story. ''A & P'' was not taken as an utterance—ours or Updike's—because the concrete situation in which it was presented did not support such a reading. ''A & P'' was taken as a move in an experiment rather than as a move in a conversation; it was a mere text, given (in photocopied form) to readers who were asked to ''do things to it.'' Behind the text was the considerable authority of the institution and of the experiment, but the text itself was little more than an example, for research purposes, of appropriate stimulus materials. No wonder, then, that in this situation the student readers adopted other stances: reading for information or events. (One reader who objected strongly to what she saw as the sexist nature of the story was clearly reading in a dialogic way, although it wasn't clear whether her dialogue was with Sammy, Updike, or the experimenters; unfortunately, we didn't know enough to ask. For a feminist critique of ''A & P'', see Bogdan, Pitt, & Millen, in press.)

Bakhtin also helps us make more sense of the results of Study 4. This time the texts were not stimulus materials that readers used to complete various tasks; instead, the texts were occasions for response. The interviewer assumed that the readers would have responses to each text, and he shared his. Rather than being ''controlled,'' the readers were participating in the creation of a conversation in which, after the fact, it was possible to find ''regularities'' (Rubin, 1989). Because of the extent to which the texts were embedded in a flow of conversation—the interviewer did not merely go on to the next question, but regularly responded to the readers' views—it was easier for a reader to treat the text as an utterance: in Bakhtin's terms, "an expression of the position of someone speaking individually in a concrete situation of speech communication" (1986, p. 84). But whose utterances were they? In Bakhtin's view, of course, "our speech is filled to overflowing with other people's words" (1981, p. 337), so the answer need not be simple. It's reasonable to suppose that the texts were seen as both the authors' utterances and the interviewer's. The authors', because the texts were not photocopies but published copies, and thus more readily seen as authored; and the interviewer's, because he personally handed a copy of the text to the reader, saying, "I'd like you to read this."

Conclusions

Now that we have presented two views, from psychology and from literary theory, it's worth considering how different they really are. According to Danziger, theory and methods should be congruent. What this means for a theory of dialogic reading, we suggest, is that one must use "social" methods to study a "social" theory; in other words, one sets up, or stages, a dialogue. Bakhtin, on the other hand, stresses the importance of how the text is framed. Whether a piece of discourse is taken as text or as utterance depends crucially on the "concrete situation" in which it is embedded. In order that texts be taken as utterances they must be embedded in concrete situations that support dialogue.

In the last analysis we think the two explanations illuminate the same ground from different points of view. The methods used to study particular readings constitute one aspect of the concrete situation in which the readings are inevitably embedded. The methods used in Studies 1–3 helped create one type of situation (and thus supported certain types of reading), whereas the different methods of Study 4 helped create a quite different type of situation (and thus supported another type). Whether one focuses on the methods, with Danziger, or the situation, with Bakhtin, both psychological and literary accounts suggest that dialogic reading is appropriately studied by setting up studies as dialogues.

This is not to say, however, that dramatization is the only correct way to do research. On the contrary, we believe there is a place for testing hypotheses, and in many circumstances statistical inference is an essential research strategy. But there is also a place—and for the study of phenomena such as dialogic reading it's an important place—for other types of studies. Ultimately it should be theory, not method, that determines the aim and shape of an investigation. The problem is that researchers who blindly obey the methodological imperative are unlikely to catch their rabbits. And if they don't, how will the rest of us ever get any rabbit stew?

Notes

1. After the fact, of course, it is possible to conduct quantitative analyses on the data collected; for instance, one might determine to what extent independent raters identify certain responses as story-driven versus dialogic. The crucial question is whether quantification is an imperative, driving and shaping the design of the study.

2. It should be clear that such a view of the reading process has profound consequences for understanding the status of school texts. The classroom situation, the larger social institution of public education in which it is embedded, and the even larger social institutions that determine what counts as knowledge (e.g., academic disciplines), all influence in various ways for various readers how a string of signifiers may be structured into an utterance. A story presented to a class from a text anthology of short fiction will, at least for some readers, be radically different than the "same" story in a book handed across the aisle in a bus.

References

Bakhtin, M. M. [V. N. Vološinov]. (1973). *Marxism and the philosophy of language*. L. Matejka & I. R. Titunik (Trans.). Cambridge, MA: Harvard University Press. (Original work published 1929)

Bakhtin, M. M. (1981). *The dialogic imagination*. M. Holquist (Ed. and Trans.), C. Emerson (Trans.). Austin: University of Texas Press. (Original work published 1975)

Bakhtin, M. M. (1986). *Speech genres and other late essays*. C. Emerson & M. Holquist (Eds.), V. W. McGee (Trans.). Austin: University of Texas Press. (Original work published 1979)

Beaugrande, R. de. (1982). The story of grammars and the grammar of stories. *Journal of Pragmatics, 6*, 383–422.

Bogdan, D., Pitt, A., & Millen, J. (in press). Approaches to gender in teaching John Updike's "A & P." In E. Evans (Ed.), *Critical approaches to teaching fiction in secondary schools*. Australia: St. Clair.

Booth, W. (1961). *The rhetoric of fiction*. Chicago: University of Chicago Press.

Chatman, S. (1978). *Story and discourse: Narrative structure in fiction and film*. Ithaca, NY: Cornell University Press.

Danziger, K. (1985). The methodological imperative in psychology. *Philosophy of the Social Sciences, 15,* 1–13.

Danziger, K. (1988). On theory and method in psychology. In W. J. Baker, L. P. Mos, H. V. Rappard, & H. J. Stam (Eds.), *Recent trends in theoretical psychology* (pp. 87–94). New York: Springer-Verlag.

Ericsson, K. A., & Simon, H. A. (1984). *Protocol analysis: Verbal reports as data.* Cambridge, MA: MIT Press.

Gibson, J. J. (1979). *The ecological approach to visual perception.* Boston: Houghton Mifflin.

Gould, S. J. (1989). *Wonderful life: The Burgess Shale and the nature of history.* New York: W. W. Norton.

Hunt, R. A. (1989). Learning to converse with texts: Some real readers, some real texts, and the pragmatic situation. *SPIEL: Siegener Periodicum zur Internationalen Empirischen Literaturwissenschaft, 8* (1), 107–130.

Labov, W. (1972). *Language in the inner city: Studies in the black English vernacular.* Philadelphia: University of Pennsylvania Press.

Lofland, J., & Lofland, L. H. (1984). *Analyzing social settings: A guide to qualitative observation and analysis* (2nd ed.). Belmont, CA: Wadsworth.

Lotto, E. (1989). Utterance and text in freshman English. *College English, 51,* 677–687.

Miller, A. G. (1986). *The obedience experiments: A case study of controversy in social science.* New York: Praeger.

Mook, D. G. (1983). In defense of external invalidity. *American Psychologist, 38,* 379–387.

Mook, D. G. (1989). The myth of external validity. In L. W. Poon, D. C. Rubin, & B. A. Wilson (Eds.), *Everyday cognition in adulthood and later life* (pp. 25–43). New York: Cambridge University Press.

Odell, L., & Goswami, D. (1982). Writing in a non-academic setting. *Research in the Teaching of English, 16,* 201–223.

Odell, L., Goswami, D., & Herrington, A. (1983). The discourse-based interview: A procedure for exploring the tacit knowledge of writers in non-academic settings. In P. Mosenthal, L. Tamor, & S. A. Walmsley (Eds.), *Research on writing: Principles and methods* (pp. 221–236). New York and London: Longman.

Polanyi, L. (1985). *Telling the American story: A structural and cultural analysis of conversational storytelling.* Norwood, NJ: Ablex.

Reddy, M. J. (1979). The conduit metaphor: A case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and thought* (pp. 284–324). Cambridge, England: Cambridge University Press.

Rosenblatt, L. M. (1978). *The reader, the text, the poem: The transactional theory of the literary work.* Carbondale: Southern Illinois University Press.

Rubin, D. C. (1989). Issues of regularity and control: Confessions of a regularity freak. In L. W. Poon, D. C. Rubin, & B. A. Wilson (Eds.), *Everyday cognition in adulthood and later life* (pp. 84–103). New York: Cambridge University Press.

Vipond, D., & Hunt, R. A. (1984). Point-driven understanding: Pragmatic and cognitive dimensions of literary reading. *Poetics, 13,* 261–277.

Vipond, D., Hunt, R. A., Jewett, J., & Reither, J. A. (1990). Making sense of reading. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood* (pp. 110–135). Norwood, NJ: Ablex.

6 Adopting Multiple Stances in Conducting Literacy Research

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Judith Green argues (this collection) that literacy researchers need to adopt a range of different disciplinary perspectives in order to fully understand literacy events. Each of these perspectives, she argues, serves as a "lens" that illuminates the phenomenon being studied. In this chapter, I want to extend Green's discussion of disciplinary perspectives by arguing that literacy researchers need to adopt a range of different stances. For the purpose of this paper, I am defining *stance* to mean an orientation or perspective that focuses a researcher's attention on particular aspects of a literacy event. Adopting a particular stance, therefore, means selectively focusing on, attending to, or foregrounding certain features of a literacy event.

Take, for example, Hunt and Vipond (this collection, chap. 5). As they attempted to study the phenomenon of "point-driven" readings, they began their analysis of readers' responses by focusing on the type or mode of response—whether or not, given certain treatment effects, readers would generate "information-," "story-," or "point-driven" responses. As they became more frustrated with their inability to understand point-driven reading, however, they adopted what could be called a social stance. They shifted their attention to focus more on the influence of the social context, purpose, and roles as shaping a point-driven reading. They focused on readers' own sense of social purpose for reading and responding. Hunt and Vipond's "social" stance differs considerably from that of Graesser, Magliano, and Tidwell (this collection), who focus more on aspects of text structure as shaping comprehension, what could be called a "textual" stance. And, their stance differs from Brodkey's and McLaren's analysis of literacy in terms of cultural institutions, what could be defined as a "cultural" stance; or from Moll's stance in his research on Hispanic families' knowledge of various phenomena, what could be defined as a "field/disciplinary" stance.

Four Stances Applied to Literacy Research

Researchers may adopt one or more types of stances in conducting literacy research (Beach & Hynds, 1990). In adopting each of these stances, researchers focus on the following features of a literacy event:

> Textual: participants' knowledge of discourse organization or structure operating in an event.
>
> Social: participants' social purposes, motives, roles, context, and uses of discourse in an event.
>
> Cultural: participants' cultural attitudes, values, and assumptions.
>
> Field/Disciplinary: participants' knowledge of topics or discourse/rhetorical conventions unique to a field or discipline.

For example, in analyzing a reader's response to a poem, researchers adopting a textual stance may focus on the reader's knowledge of literary or text structure conventions as constituting the meaning of their experience with the poem. If they adopt a social stance they may, as did Hunt and Vipond, focus on a reader's perceptions of the social context—their purpose for responding, their sense of audience, and their conception of their own role. In adopting a cultural stance, researchers may consider how a reader's own cultural attitudes and values shape his or her responses. And, in adopting a field/disciplinary stance, researchers may consider how students acquire knowledge of conventions constituting a certain field or discipline: psychology, economics, literacy criticism, history, philosophy, and so on.

As I will discuss in this chapter, when adopting each of these stances, researchers may also focus on participants' own stances, stances that constitute the meaning of a literacy event. As Deborah Brandt (1985) notes, "literacy has less to do with overt acts of reading and writing than it does with the underlying postures toward language" (p. 128).

In order to understand the full meaning of literacy events, researchers should ideally adopt several of these stances. As Halliday (1978) has argued, understanding literacy development requires a consideration of the range of different functions of language: textual, interpersonal, and ideational/referential (to which I would add the "cultural"). Moreover, because these stances overlap, researchers need to study the interactions between them. To take one combination—a textual/field combined stance: how readers or writers define meanings according to text conventions may vary, according to different fields or disciplines. The text conventions for conducting a philosophical argument may differ considerably from the text conventions of a scientific lab report. Researchers, therefore, need to conceive of literacy development in terms of different combinations of these stances, for example, textual/field, textual/social, or textual/cultural.

How is all of this related to this volume? Applying all four of these stances and considering the interaction between these stances requires a multidisciplinary perspective. Certain disciplinary perspectives are particularly useful for understanding a particular stance. Given its interest in structures, linguistics may be particularly relevant for adopting a textual stance. However, cultural anthropology may also be useful for understanding the structure or organization of rituals or ceremonies. Combining these disciplinary perspectives serves to widen the possibility of adopting all four. For example, while a cognitive psychological perspective may not afford the social or cultural insights provided by sociolinguistics or cultural anthropology, combining these perspectives fosters the possibility of a textual/social or textual/cultural combination.

In discussing each of these stances, I will make three points:

> Adopting only one stance provides an insufficient understanding of literacy development.
>
> Adopting combinations of these stances yields a fuller insight into literacy development.
>
> Adopting all four stances requires a multidisciplinary perspective.

In discussing how literacy researchers may apply each of these stances, as well as integrate the different stances, I will cite examples from literacy research, including research on dialogue-journal writing. In that research (Beach & Anson, in press), we are analyzing the quality of the exchange between students as fostering learning. In applying these four stances, we have discovered that all are useful for understanding the value and function of dialogue journals in the classroom.

A Textual Stance

In adopting a textual stance, researchers are focusing on readers' or writers' knowledge of text, literary, or genre conventions. Rather than assume that the discourse meaning resides "within" a text's organizational structure, researchers need to focus on the transaction between readers' or writers' knowledge of text conventions and their understanding or production of texts (see Golden, this collection; Graesser, Magliano, & Tidwell, this collection).

Knowledge of discourse conventions is a tacit, "knowing-how" procedural knowledge, rather than declarative knowledge. This means that researchers need to intuit readers' and writers' knowledge of text conventions by studying *how* they respond to or produce texts. For example, analysis of readers' responses to literary texts reflects their knowledge of literary genres, acquired from years of reading texts. In order to examine the influence of readers' background reading experiences on their responses to poetry, Svensson (1985, 1990) compared adolescents with extensive background reading experiences to those with little background experience. He found that readers with extensive background experience were better able to interpret poetry than those with little background experience.

Applying Appropriate Text Conventions

In responding to literacy events or texts (Bloome & Bailey, this collection), readers and writers learn to apply text conventions that are most appropriate for understanding that event or text. In adopting a textual stance, researchers focus on how readers and writers select, apply, and revise text conventions when responding and producing texts. In responding to a mystery story, frustrated by the inadequacy of existing knowledge of mystery story conventions, readers revise their knowledge of conventions to create alternative, more satisfactory explanations of characters' motives.

This knowledge of prototypical text types serves to organize readers' and writers' perceptions of texts. Becoming and being literate in a culture requires the ability to use a range of different text types or models: the letter, essay, report, poem, review, editorial, story. Rather than conceiving of these text types simply in terms of text features, researchers need to adopt a combination text/social stance to examine the readers' and writers' *use* of text types to entertain, persuade, critique, inform—social functions that serve to define their membership in different social groups. For example, writers in middle-class culture learn to write thank-you notes which function to maintain social relationships. Not having knowledge of or access to these different text models may mean that persons are socially excluded from group membership. Not knowing how to diplomatically conduct a conversation may mark someone as "outside" a group.

Researchers also need to consider the ways in which knowledge of text types shapes perceptions of experience. Bruner (1986) argues that narrative serves as a way of knowing, a way of organizing experience.

And experience with extensive writing of analytic texts serves to enhance the ability to interpret texts (Nystrand & Gamoran, in press) and the capacity to remember and define relationships between concepts (Langer & Applebee, 1987). From the experience with analytic text models, students learn to define the logical organization of texts according to the importance or relevance of information in a text, something less-able readers have difficulty learning (Johnston & Winograd, 1985).

Given the value of acquiring these text models, researchers need to understand how students acquire these models through reading. For example, Durst (1984) examined students' increasing capacity to employ analytic writing from grades 3 to 12. To some degree, the kinds of texts students read was related to their writing of those texts. However, students' own writing often does not match the quality of text organization in students' textbooks (Applebee, Durst, & Newell, 1984).

The text models learned in schools may bear little relationship to the text models employed in the home. For example, expository essays are typically judged as effective if they are written in an objective, detached style (Purves & Hawisher, 1990). This form differs from the more personal text models prevalent in many homes, particularly in homes without access to more academic text models (Rose, 1989). The lack of a match between the text models prevalent in the schools versus those prevalent in the home may actually be used to exclude or marginalize students from "less advantaged" homes (Purves, 1989). Moreover, students who are not familiar with the different social functions of text models are doubly disadvantaged.

In order to study *how* readers and writers conceive of texts, events, and the world in terms of text conventions, researchers may ask students to read texts from a writer's perspective—responses that may reflect students' procedural knowledge of text conventions. Researchers could then examine these same students' own writing and revisions as reflecting knowledge of text conventions. Students' think-alouds while writing could also be analyzed as reflecting knowledge of conventions.

Studying Intertextual Links

Adopting a textual stance also involves understanding the ways in which readers and writers define links between a range of different kinds of texts. As Bloome and Bailey (this collection) argue, any literacy event is based on links to a vast network of other related texts and events, as well as a history of prior events. Becoming literate involves learning to define equivalences between experiences, to perceive differences involving similar phenomenon (Dyson, 1990). For example, as they begin to write, young children learn to perceive equivalences between their use of form in drawing and form in their handwriting. They therefore learn to perceive equivalences or similarities in terms of similar visual form, suggesting the relevance of work in the visual arts to understanding the acts of connecting visual, oral, and written forms.

In studying the process of intertextual linking, researchers may examine the extent to which readers and writers not only recall related texts and experiences, but also how they elaborate on those texts and experiences. By elaborating on their recollections, readers and writers may begin to define opinions about or attitudes toward those memories, discoveries that serve to illuminate the current text (Beach, Appleman, & Dorsey, 1990). Researchers may also examine the level of abstraction of intertextual links between current and past texts. For example, abstracting characters' acts, beliefs, and goals in the current text may help readers and writers recall prototypical acts, beliefs, and goals stored in memory (Schank, 1982).

However, these links are not made in a vacuum. Researchers also need to adopt a combination textual/social stance in order to understand the ways in which making intertextual links is a learned social practice, facilitated in social context. In the classroom, for example, students are often not encouraged to define such links (Rogers, 1989; Wolf, 1988). Based on her study of literature instruction in secondary schools, Wolf found that texts were generally taught as autonomous entities, with no reference to the vast backlog of students' prior reading experience. The students had little opportunity to "read resonantly, with an ear for the long-running conversations that comment on our history and ways of being" (p. 34). In contrast, students in elementary school classrooms are often making complex textual and social links between a range of different activities (Short, 1986).

Textual Stance Applied to Dialogue-Journal Writing

In our dialogue-journal research, we have been examining the ways in which students organized their entries in journals kept for a linguistics class. Informal journal writing need not conform to the same conventions of formal writing, which is logically sequenced and coherent. In his comparison of effective versus less-effective journals, Fulwiler (1987) found that effective journals were subjective, inquisitive, spontaneous, contradictory, tentative, and exploratory, often containing questions and expressions of doubt, all of which is discouraged in the formal, academic expository essay. Many students in our study, however, wrote journal entries as well-organized "mini-essays." They initially stated a thesis and then cited example or evidence to support it. From a textual stance, this organizational structure represents the students' difficulty in using writing to spontaneously record their unfolding thoughts; the students may have first formulated their thoughts and then wrote in the journal. In more informal entries, though, students would begin an entry with a question about some aspect of the course they did not understand, and then attempt to explore possible answers. Or in thinking about language attitudes, a topic in the linguistics course, they cited their own personal experiences with expression of language prejudices.

One reason for these differences had to do with the students' own perceptions of differences between journals and essays. We gave students semantic differential scales containing items such as "informal/formal," "spontaneous/predetermined," and asked them to rate both their perceptions of "the journal" and "the essay" on the scales. The students differed significantly between the journal and essay ratings for all of the scales. And students' perceptions of these forms were related to their actual writing: students who perceived the journal as "formal" were more likely to write more formal entries. Thus, from the perspective of a textual stance, the students' own assumptions about text conventions may have shaped their journal writing.

A Social Stance

As posited by social constructivist/interactionalist theorists (Nystrand, 1990), literacy is a social act. In order to understand the social dimensions of a literacy event, researchers focus on the ways in which social motives, goals, roles, attitudes, and conventions constitute the meaning of literacy events. As both Heap (this collection) and Bloome and Bailey (this collection) argue, this requires a focus on the "particular"—those unique, specific aspects of an event that shape its social meaning. Through the act of sharing discourse, participants define their social membership and identity in communities such as book clubs, computer bulletin boards, community action groups, families, or religious organizations.

Rhetorical and Pragmatic Analyses of Social Interaction

In adopting a social stance, researchers may examine readers' and writers' conceptions of relationships between the "actual author," "speaker," "implied author," "narrative audience," "intended audience," and "actual audience" (Rabinowitz, 1987; Booth, 1988). In doing so, researchers need to consider how participants' perceptions of a literacy event shape their rhetorical and pragmatic decision-making about their role, goals, and intended effects in that event. After recognizing that the social consequences of an impersonal, large-group context were influencing the students' responses to texts, Hunt and Vipond (this collection) employed a more "user-friendly" context, in which actual texts were given to students and students were asked to provide their own responses to the interviewer.

In some cases, a social stance requires understanding a literacy event in a historical context. In what he defines as "rhetorical hermeneutics," Steven Mailloux (1989) argues that understanding participants' social motives in an event requires an analysis of the attitudes and beliefs operating in a historical context. He cites the example of the 1972 ABM treaty's reference to banning the use of nuclear weapons in space. The Reagan administration, in order to justify research on the "star wars" SDI system, attempted to reinterpret the ABM treaty as not prohibiting SDI research. They argued the originally "intended meaning" of the treaty did not exclude research on a "defensive" system, while SDI opponents argued that the language of the treaty explicitly referred to the use of weapons in space. Both sides claimed that theirs was the "correct meaning" of the treaty's language. Mailloux posits that differences in interpretation of an event require some analysis of the rhetorical or historical context, as shaped by, for example, the motives of the Reagan administration or the SDI opponents, both representatives of larger political communities (the defense industry, the military, concerned scientists, the public). In this analysis, understanding the social motives, beliefs, roles, and the rhetorical strategies required a historical analysis of the cultural context of the Reagan era.

In analyzing a literacy event, researchers may also examine the participants' sense of the "quality" of an event, as reflected in their sense of personal involvement or engagement. For example, much of the research on classrooms (Goodlad, 1984; Sizer, 1984; Powell, Farrar, & Cohen, 1986) documents students' lack of involvement or engagement in classroom discussions. An analysis of discussions in fifty-eight eighth-grade classrooms (Nystrand & Gamoran, in press) indicated that on average, only less than a minute of classtime was devoted to class discussion. Of the teachers' questions, 12 percent were "authentic"—they were genuinely seeking answers—and only 11 percent of the questions were follow-up probes to students' answers. In analyzing the quality of classroom discussions, researchers might focus on the degree to which students are actively involved in defining the nature or direction of discussions.

Given the importance of the social aspects of dialogue journals, we recognized that in order to understand the differences in students' use of the journal, in our research we needed to examine the specific social interaction that occurred within pairs of students. In studying these pairs, we compared the journal entries of pairs that we considered to be "effective" versus "less effective." For the more effective pairs, students built a social bond through self-disclosure about their own lives and experiences. As a result, students were more willing to organize and extend their entries for the purpose of dialogic exchange instead of simply rehearsing or summarizing course content. They were also more willing to pose questions or reflect on each other's ideas, moving them away from the mini-essay formats. Thus, blending a social stance with a textual stance gave us a better understanding of students' propensity to organize entries in formal rather than informal ways. As the exchange of entries evolved during the course, students made intertextual references to previous entries as well as to other texts. Thus, rather than perceive intertextuality simply from a textual stance, we focused on the ways students' intertextual links to other readings, familiar to both members of a pair, served to bolster their social relationships. In his analysis of classroom exchanges in elementary classrooms, Bloome (1989) found that students deliberately made certain intertextual links in order to socially include or exclude certain students. When students were discussing texts, student A would make connections understood by student B but not by student C, thereby ostracizing student C from the social relationship between A and B.

In adopting a social stance, researchers may determine the social dimensions of literacy events by asking participants to talk about their perceptions of the history, intertextual links, social roles, or motives shaping particular aspects of an event. For example, Odell and Goswami (1982) interviewed employees about their forms of address or style in their memos, interviews that revealed a complex set of social motives and an awareness of the social hierarchy within the employees' organization.

While our textual stance is informed by knowledge of text linguistics, adopting a social stance draws on knowledge of rhetoric, discourse pragmatics, social psychology, history, and sociolinguistics. This multidisciplinary blend yields a richer insight than that afforded by adopting a single disciplinary perspective.

At the same time, researchers who adopt a social stance often begin to perceive the influence of cultural differences on social behavior. In our dialogue-journal research, we found that students' ethnic background or "identity" (Ferdman, 1990) influenced their willingness to socially interact with their partners. In order to explain this interaction between the social and the cultural, I now turn to a discussion of the cultural stance.

A Cultural Stance

In adopting a cultural stance, researchers go beyond the textual and social stances to consider the ways in which literacy events or discourse practices are culturally constituted. Rather than conceive of literacy in terms of text organization or social interaction, researchers examine literacy events as constituted by various cultural practices. These "practices" include defining gender or ethnic identity, resisting the dominant culture, and engaging in community celebrations or rituals.

Cultural Practice: Defining Gender Identity

To take one example, researchers may examine the relationship between literacy events and the cultural practice of defining gender identity. In past experimental research, factors such as sex were perceived to *cause* differences in reading or writing performance: being male could cause one to have more difficulty empathizing with and/or adopting different perspectives in responding to literature than if one were female.

A cultural practice such as defining or "doing" gender is culturally constituted within specific cultural contexts. Researchers often assume that certain behaviors or traits are "masculine" or "feminine" according to mutually exclusive, biological oppositions, ignoring the cultural forces shaping gender (Putnam, 1982). "Being" a male or female means behaving, talking, or dressing in ways deemed appropriate by a culture. For example, in writing romance and adventure stories, British adolescents vicariously developed their own gender identity through their characters' actions and language (Moss, 1989). Females wrote stories about social relationships, while males wrote about adventure. The females dramatized the conflicts involved in considering the social consequences of actions. The males dramatized their own individual "actions" in overcoming adversities or foiling their enemy rivals. Research on gender differences in conversation also indicates that females are more likely than males to use conversation to establish and maintain relationships (Tannen, 1990). Adopting an adversarial, competitive stance is a way of communicating that is associated with a masculine orientation in the culture (Tompkins, 1987; Frey, 1990). Rather than gender *causing* differences in these ways of communicating, gender differences serve more as the *effect* of these communication differences (Rakow, 1986). Becoming socialized by the culture to value language for establishing and fostering relationships as opposed to competing with others may constitute gender differences.

This suggests the need to examine how the discourse practices of various cultural institutions serve to construct gender roles. In order to examine the effects of technology on gender socialization, Rakow (1986) conducted an ethnographical study of women's use of the telephone in a small midwestern town. She found that women's telephone talk served as "gender work" in that it functioned to build and maintain caring relationships in the small town's social network. This suggests to Rakow that "it is not gender that causes the women's behavior but our gender system which locates some people as women in a particular organization of social life" (p. 14). Thus, teachers who perceived female secondary students as "less able" were content to let them read romance novels during classtime because such reading not only kept them occupied, but also because the teachers assumed that the novels served to define their cultural roles (Christian-Smith, 1989). The teachers rarely encouraged these students to read different materials. And these students responded to the novels primarily in private or personal ways, mitigating any tendency to critically examine the gender role assumptions inherent in these novels.

In adopting a cultural stance, researchers may also focus on how students perceive their school experience in terms of cultural differences between class or ethnic groups. In a two-year observational study of a large, suburban Detroit high school, Eckert (1989) found that the students' perceptions of school were shaped by two predominate categories: "jocks," students who were likely to be middle-class, pro-school, involved in athletics and extracurricular activities; and "burnouts," students who were likely to be from blue-collar homes and who were less involved in school and more involved in work and neighborhood activities. The jocks learned to use the school's social networks to gain the information necessary for success in the school. In contrast, the burnouts, who were more accustomed to functioning in small, coherent neighborhood or workplace groups, had more difficulty coping with the large, bureaucratic structure of the school. Moreover, because of their symbolic display of what were perceived to be "deviant" working-class attitudes, burnouts were often excluded from academic courses and social networks associated with middle-class values.

Jocks learned to succeed in the bureaucratic organization of a large, suburban high school by learning to gain access to and exploit the grapevine information system. Learning to "play the game"—by being a "good student" who is "active in extracurricular activities"—is culturally tied to middle-class social norms of punctuality, language use, and dress. All of this serves to exclude and marginalize the burnout from acquiring those school discourse practices necessary for success in that institution.

In focusing on socialization of students in the school culture, researchers need to examine the relationships between institutions' goals of literacy development—to inculcate "skills," to develop self-efficacy, to provide a "liberal arts" education, to prepare students for the workplace—to their conception of valued literacy practices. For example, certain segments of the business community may argue that the primary reason that unemployed parents need to acquire literacy skills is to obtain entry-level employment. Such a rationale defines literacy primarily in terms of adapting to the existing economic system, rather than conceiving of literacy as insuring social mobility. As Fingeret (1990) notes, many literacy programs are not about

> "empowerment" of people who are poor and disenfranchised; [they are] about maintaining the present distribution of wealth and power. . . . Persons who have been in positions of powerlessness are the focus of efforts to provide them with tools that provide access to power. . . . But nobody is talking about a redistribution of power. (p. 36)

In adopting a cultural stance, researchers also ask Brodkey's question (this collection), "what's wrong here," focusing on the poststructuralist concern with the problematic, the tensions and contradictions underlying literacy socialization. One of the most prevalent tensions is the conflict between the discourse practices privileged in the home and/or ethnic group and those privileged in the school. Given these tensions, peer groups representing certain ethnic or working-class groups often create their own practices to defy the schools' gatekeeping role of reifying middle-class discourse practices. As a result, these students are often assigned to "lower tracks." African American students who exhibited "street" behaviors were often not assigned to academic tracks even though they were capable of successful academic work (Gilmore, 1985). And African American students who are fearful of being ostracized by their peers for being "good students" develop a range of "camouflage" strategies to maintain their peer group membership (Ogbu, 1990).

Meshing the Cultural with the Textual and Social Stances

The cultural stance serves to illuminate the textual and social stances. Readers respond to texts not simply in terms of form or their social identification with the text, but also as opportunities to employ cultural practices. In responding to stories and ads, adolescents perceive the characters and persons in terms of experimenting with gender identity (Beach & Freedman, 1990). In our study, the students responded most positively to a Coty Musk cologne ad picturing a young adolescent couple erotically embracing while leaning against a car, the ad a group of adults rated as the most stereotyped portrayal of women of the four ads used in the study. As suggested by the students' responses, this ad was appealing because its sexuality defies adult norms and appealed to their needs to define gender identity.

A student's social identity as "student" is shaped by various cultural institutions—home, community, and peer-group allegiance—creating tensions between the kinds of socialization occurring in schools versus those in "real-world" contexts. For example, by comparing the calculation skills of urban candy-sellers with those of urban and rural children who did not sell candy, Saxe (1988) found that the urban candy-sellers could calculate complicated price amounts at amazing speeds, based on a representation system quite different from that acquired in mathematics instruction in schools. Saxe argued that this representational system, a cognitive practice, was unique to the social context of the urban "street world" that fostered and rewarded that practice.

These tensions are reflected in expressions of urban rap poetry musicians who express certain political ideas that are censored even within the music industry for fear of lack of sales to a white majority. Adolescents whose literacy practices may be perceived as inferior by those of the dominate culture may perceive their own practices, and hence their own communities, as inferior. As Stephen Graubard (1990) notes:

> So long as there is a middle-class emphasis on the "sophistication" of certain children—worldly and well traveled—and an implicit or explicit disdain for the "barbarism" of those who choose to subscribe to other values, with an even greater disdain, rarely expressed openly, for those of other races and social classes unfortunate enough to live in the urban deserts of this country, there will be little charity, great illusion, and perpetual fear. (p. 278)

Thus, persons' perceptions of their social roles and appropriate social interaction in a literacy event are shaped by their cultural socialization. As Gilligan's work (1982) suggests, females in American culture may be more context-sensitive, perceiving events in terms of the different perspectives or social contingencies operating in that event, while males may be more likely to perceive an event in terms of achieving their own competitive goals regardless of the contingencies operating in the context.

In our dialogue-journal research, students' gender orientation often influenced the quality of the partners' social interaction. Students with a more masculine orientation often had difficulty entering into a genuine dialogue with their partner. In some cases, these students addressed their partner only in the third person, gearing their remarks primarily to the instructor as audience. Some of these students may have difficulty sharing because they have been socialized to be competitive.

So the cultural stance overlaps with the textual. As suggested by questionnaire descriptions of their "roles" in writing dialogue-journal entries, students' difficulty in writing informal, spontaneous entries may reflect their assumptions about appropriate discourse in the culture of the university. In adopting a cultural stance, researchers examine the ways in which students represent themselves through various discourses (Brodkey, this collection; Poovey, 1990): how, for example, students learn to define themselves through the discourses of the law, science, religion, business.

At the same time, researchers need to continually recognize the potential for tensions between the textual, social, and cultural. For example, in Hull and Rose's (1990) case-study report of a college student from a working-class, ethnic background enrolled in a remedial writing program at UCLA, they found that in a dialogue with Rose about a poem, the student continually qualified, challenged, and interrupted the investigator's talk in ways that undermined the teacher's goal-driven expectations. This student's "unconventional" way of responding to a poem conflicts with the usual, "efficient" conversational pattern of initiation-comment-response, a pattern that could actually limit rather than foster some of the knowledge building the student employed in his response. By noting the tension between the textual pattern and the background social and cultural experience, Hull and Rose avoid the limitations of rule-bound remedial programs in favor of dialogic exchanges that help students learn to generate and question knowledge.

Meshing a cultural stance associated with work in cultural anthropology, popular culture, and poststructuralist criticism with the textual and social stances obviously requires a multidisciplinary perspective. Persons working in these fields may be better able to address issues of literacy research by considering related work in linguistics, rhetoric, literary criticism, sociolinguistics, and social psychology.

A Field Stance

In adopting a field or disciplinary stance, researchers are concerned with how persons acquire literacy practices within the context of a particular field, domain, or discipline. There is considerable debate as to whether knowledge is "domain-specific" or "general" (Carter, 1990; Perkins & Salomon, 1989). Expert-novice research shows that persons acquire expertise from extensive experience within a particular field, domain, or discipline: mathematics, chess playing, medicine, computer programming, and so on. And, general heuristics often does not work as effectively in coping with domain-specific problems in artificial intelligence research as do "expert systems" built on knowledge unique to those problems. On the other hand, general knowledge may be helpful for novices in acquiring domain-specific knowledge (Carter, 1990; Perkins & Salomon, 1989).

Adopting a field stance involves defining specific literacy practices associated with specific fields, domains, or disciplines. By comparing expert and novice lawyers' think-aloud analysis of a legal case, Lundeberg (1987) found that experts were better able to define the underlying legal assumptions and implications, as well as recall related cases, than were the novices. Expert social scientists were better able to analyze social problems in terms of underlying theoretical constructs than were novices (Voss, Greene, Post, & Penner, 1983). In her comparison of expert and novice philosophers, Geisler (1990) found that learning to "think like a philosopher" entailed learning to summarize and refute positions according to certain conventional forms of reasoning, something that both novices and experts could do. By integrating the field with the social stance, Geisler examined the social or interpersonal interactions in the philosophers' arguments, noting that the experts were more adept than the novices at relating socially to other philosophers.

Thus, the field stance cannot be divorced from the textual, social, and cultural stances. For example, from a field/textual stance, the nature and function of text models and judgments of texts' validity, relevance, and significance vary considerably across different fields, domains, and disciplines. The persuasive techniques associated with writing a philosophical critique may differ from those appropriate for a medical research report. By comparing writers' perceptions of appropriate rhetorical strategies across different fields, researchers may better understand how students learn to understand and produce texts within these different fields (Bartholomae, 1985).

In adopting a field stance, researchers may focus on the tensions and disparities between the ways in which field knowledge is learned, employed, and valued in different contexts. Domain-specific knowledge as taught in schools, for example, may bear little resemblance to that knowledge as employed in "real-world" contexts. As Brown, Collins, and Duguid (1989) noted:

> Classroom activity very much takes place within the culture of schools, although it is attributed to the culture of readers, writers, mathematicians, historians, economists, geographers, and so forth. Many of the activities students undertake are simply not the activities of practitioners and would not make sense or be endorsed by the cultures to which they are attributed. (p. 34)

Researchers could examine possible reasons that studying law, business, or medicine inevitably doesn't match the pragmatic demands of actual social contexts of the courtroom, the business negotiation, or the doctor/client interaction. Researchers could also consider the ways in which specialized, elaborated academic criticism valued in the academy may not be valued in real-world contexts.

More research is also needed on the nature of literacy practices involved in adolescents working—generally in low-paying service jobs—as related to those practices required in schools. Greenberger and Steinberg (1986) found that, contrary to the American myth that work is "good" for people, youth work resulted in increased crime, drug use, "premature cynicism," and reduced academic performance.

Researchers could also consider the "funds of knowledge" operating in students' homes that are not valued in schools (Moll, this collection). In examining references to various topics in the Hispanic families' everyday lives, Moll extracted a range of categories by which this knowledge was organized. In the home, these categories are often deliberately linked, according to shared family needs, linking that often does not occur in schools (Wolf, 1988). Researchers could compare the kinds of intertextual links between these categories acquired in the home or neighborhood with those found in schools.

In his autobiographical recollection of how he became a cognitive psychologist, John Hayes (this collection) notes that he discovered a way of looking at the world that made sense, more so than the perspective of a behavioral psychologist. In studying the socialization of literacy practices associated with certain fields, researchers also need to examine reasons why people adopt or gravitate toward certain fields.

Summary

In studying literacy practices, I encourage researchers to adopt one or more of these four stances, as well as combinations of these stances. By adopting multiple stances, researchers examine literacy in increasingly more complex ways, moving away from the often simplistic perspectives that have trivialized much of literacy instruction. What is most important is that, rather than assuming only one stance—for example, the currently popular social stance—researchers need to mesh or integrate these different stances. Rather than simply examine the quality of exchanges in dialogue-journal writing as a social phenomenon, researchers could, as did Hunt and Vipond (this collection), consider how social needs or motives shape perceptions of textual features. By broadening the conception of literacy learning as entailing the textual, social, cultural, and field stances, researchers may ultimately contribute to a broadening of literacy instruction itself.

References

Applebee, A., Durst, R., & Newell, G. (1984). The demands of school writing. In A. Applebee (Ed.), *Contexts for learning to write* (pp. 55–78). Norwood, NJ: Ablex.

Bartholomae, D. (1985). Inventing the university. In M. Rose (Ed.), *When a writer can't write* (pp. 134–165). New York: Guilford.

Beach, R., & Anson, C. (in press). Using dialogue journals to foster response to literature. In G. Newell & R. Durst (Eds.), *Exploring texts: The role of discussion and writing in the teaching and learning of literature.* Norwood, MA: Christopher Gordon.

Beach, R., Appleman, D., & Dorsey, S. (1990). Adolescents' use of intertextual links to understand literature. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood.* Norwood, NJ: Ablex.

Beach, R., & Freedman, K. (1990). *Adolescents' responses to stereotyped portrayals of females in ads and stories.* Paper presented at the annual meeting of the American Educational Research Association, Boston.

Beach, R., & Hynds, S. (1990). Introduction: A model of discourse development. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood* (pp. 3–33). Norwood, NJ: Ablex.

Bloome, D. (1989). *The social construction of intertextuality in classroom literacy learning.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Booth, W. (1988). *The company we keep: An ethics of fiction.* Berkeley: University of California Press.

Brandt, D. (1985). Review: Versions of literacy. *College English, 47,* 128–138.

Brown, J., Collins, J., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher, 18,* 32–42.

Bruner, J. (1986). *Actual minds, possible worlds.* Cambridge, MA: Harvard University Press.

Carter, M. (1990). The idea of expertise: An exploration of cognitive and social dimensions of writing. *College Composition and Communication, 41,* 265–286.

Christian-Smith, L. (1989). Power, knowledge and curriculum: Constructing femininity in adolescent romance novels. In S. Castell, A. Luke, & C. Luke (Eds.), *Language, authority, and criticism* (pp. 17–31). New York: Falmer.

Durst, R. (1984). The development of analytic writing. In A. Applebee (Ed.), *Contexts for learning to write* (pp. 79–102). Norwood, NJ: Ablex.

Dyson, A. (1990). *Reconceptualizing child literacy development.* Paper presented at the annual meeting of the American Educational Research Association, Boston.

Eckert, P. (1989). *Jocks and burnouts: Social categories and identity in the high school.* New York: Teachers College Press.

Ferdman, B. (1990). Literacy and cultural identity. *Harvard Education Review, 60,* 181–204.

Fingeret, A. (1990). Literacy for what purpose? A response. In R. Venezky, D. Wagner, & B. Ciliberti (Eds.), *Toward defining literacy* (pp. 35–39). Newark, DE: International Reading Association.

Frey, O. (1990). Beyond literary Darwinism: Women's voices and critical discourse. *College English, 52,* 507–526.

Fulwiler, T. (1987). *The journal book.* Portsmouth, NH: Boynton-Cook.

Geisler, C. (1990). The artful conversation: Characterizing the development of advanced literacy. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood* (pp. 93–109). Norwood, NJ: Ablex.

Gilligan, C. (1982). *In a different voice.* Cambridge, MA: Harvard University Press.

Gilmore, P. (1985). Gimme room: School resistance, attitude, and access to literacy. *Journal of Education, 167,* 111–128.

Goodlad, J. (1984). *A place called school.* New York: McGraw-Hill.

Graubard, S. (1990). Doing badly and feeling confused. *Daedalus, 112,* 257–279.

Greenberger, E., & Steinberg, L. (1986). *When teenagers work: The psychological and social costs of adolescent employment.* New York: Basic Books.

Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and meaning.* London: Edward Arnold.

Hull, G., & Rose, M. (1990). "This wooden shack place": The logic of an unconventional reading. *College Composition and Communication, 41,* 287–298.

Johnston, P., & Winograd, P. (1985). Passive failure in reading. *Journal of Reading Behavior, 27,* 279–302.

Langer, J., & Applebee, A. (1987). *How writing shapes thinking.* Urbana, IL: National Council of Teachers of English.

Lundeberg, M. (1987). Metacognitive aspects of reading comprehension: Studying understanding in legal case analysis. *Reading Research Quarterly, 22,* 407–432.

Mailloux, S. (1989). *Rhetorical power.* Ithaca, NY: Cornell University Press.

Moss, G. (1989). *Un/popular fictions.* London: Virago.

Nystrand, M. (1990). Sharing words: The effects of readers on developing writers. *Written Communication, 7,* 3–24.

Nystrand, M., & Gamoran, A. (in press). Student engagement: When recitation becomes conversation. In H. Waxman & W. Walberg (Eds.), *Contemporary research on teaching.* Berkeley, CA: McCutchan.

Odell, L., & Goswami, D. (1982). Writing in a non-academic setting. *Research in the Teaching of English, 16,* 201–223.

Ogbu, J. U. (1990). Minority status and literacy in comparative perspective. *Daedalus, 119* (2), 141–168.

Perkins, D., & Salomon, G. (1989). Are cognitive skills context-bound? *Educational Researcher, 18,* 16–25.

Poovey, M. (1990). Cultural criticism: Past and present. *College English, 52,* 615–625.

Powell, A., Farrar, E., & Cohen, D. (1986). *The shopping mall high school: Winners and losers in the educational marketplace.* Boston: Houghton Mifflin.

Purves, A. (1989). *The scribal society.* White Plains, NY: Longman.

Purves, A., & Hawisher, G. (1990). Writers, judges, and text models. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood* (pp. 183–199). Norwood, NJ: Ablex.

Putnam, L. (1982). In search of gender: A critique of communication and sex roles research. *Women's Studies in Communication, 5,* 1–9.

Rabinowitz, P. (1987). *Before reading.* Ithaca, NY: Cornell University Press.

Rakow, L. F. (1986). Rethinking gender research in communication. *Journal of Communication, 36* (4), 11–26.

Rogers, T. (1989). Students as literary critics: The interpretive theories, processes and experiences of ninth grade students (Doctoral dissertation, University of Illinois at Urbana-Champaign, 1988). *Dissertation Abstracts International, 49,* 2569-A.

Rose, M. (1989). *Lives on the boundary.* New York: Free Press.

Saxe, G. (1988). The mathematics of child street vendors. *Child Development, 59,* 1415–1425.

Schank, R. (1982). *The dynamics of memory.* New York: Cambridge University Press.

Short, K. (1986). Literacy as a collaborative experience: The role of intertextuality. In J. A. Niles & R. V. Lalik (Eds.), *Solving problems in literacy* (pp. 227–232). Rochester, NY: National Reading Conference.

Sizer, T. (1984). *Horace's compromise.* Boston: Houghton Mifflin.

Svensson, C. (1985). *The construction of poetic meaning.* Malmo, Sweden: Liber.

Svensson, C. (1990). The development of poetic understanding during adolescence. In R. Beach & S. Hynds (Eds.), *Developing discourse practices in adolescence and adulthood* (pp. 136–160). Norwood, NJ: Ablex.

Tannen, D. (1990). *You just don't understand: Women and men in conversation.* New York: Morrow.

Tompkins, J. (1987). Me and my shadow. *New Literary History, 19,* 169–178.

Voss, J. F., Greene, T. R., Post, T. A., & Penner, B. C. (1983). Problem-solving skill in the social sciences. *The psychology of learning and motivation: Advances in research and theory, 17,* 165–213.

Wolf, D. (1988). *Reading reconsidered: Literature and literacy in high school.* Urbana, IL: National Council of Teachers of English.

7 Modes of Inquiry in Literacy Studies and Issues of Philosophy of Science

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A substantial portion of our time in literacy education is spent on telling teachers and potential teachers what we think we know. Whether we are advocates of direct teaching, or whole language, or something in between, our affiliations, approaches, and recommendations are based to a great extent upon our interpretations of empirical observations—our knowledge, if you will. This paper takes a fundamentally different approach. Rather than dwelling on what I think we know, I will consider what it means to "know" about literacy at all. I will not even focus on how I conduct my own research, though I will note this briefly throughout to make evident my own biases and limitations (inquiry is at least in part a personal quest).

These personal illustrations will be drawn from an in-progress study of the ways that teachers combine reading and writing and how these combinations influence students' critical reading abilities (Shanahan, 1989). This study focused on the instructional activities in reading and writing of seven volunteer teachers, first through sixth grades, who had been identified as excellent reading and writing instructors by their supervisor. On the basis of teacher diaries and investigator observation, incidences of various instructional activities were recorded over several weeks. Students in these classrooms were evaluated as to their ability to identify various kinds of errors in written texts. It was found that classrooms that evidenced the greatest amounts of authorship activities (such as student writing, writing conferencing, discussions or mentions of authors or materials read, and so on) produced the students with the greatest critical facility to identify textual errors. Students who had the most experience being authors and thinking about authors were significantly better at recognizing factual, logical, syntactic, and spelling errors in grade-level-appropriate texts.

More important than these personal illustrations, however, will be the questions that I pose about the epistemological assumptions underlying research on literacy. Our attempts to answer these questions will help us to understand the similarities and differences in the various "perspectives" with regard to basic theoretical assumptions and empirical approaches. It is the answers to these questions that determine who we are *together* as scholars and whether we are involved in a *shared* enterprise or a *fractionate* one.

There are many ways to categorize or divide up an intellectual community, of course. This is probably most easily done topically. Some of us might study teacher decision making, others the psychological connections between reading and writing, and still others the social implications of language differences. One community might examine literary criticism, and participants in this project will read and publish in particular journals and participate in particular conferences. Another group interested in how children learn to read will consider different sources and participate in other meetings. Such topical distinctions are useful, because none of us has the need or energy to know all aspects of literacy research. Topical organization increases efficiency of communication and assures a steady accumulation of knowledge on issues of interest.

However, such topical separations fail to tell the whole story of who we are and how our work together has meaning. This point can best be made through a consideration of one of the basic definitions of the term *perspective*. Perspective is the "interrelationships or proportionate significance of facts or information as considered from a particular point of view." Modes of inquiry are a useful way of thinking about a community (Lessnoff, 1974), because they determine what our points of view will be, and they carry with them the basic assumptions that we use to determine the proportionate significance of facts or information. While the merits of this type of categorization might be debatable, it is apparent that inquiry communities do exist in literacy studies and that we, whether rejecting or applauding such divisions, must understand their implications. Meehl (1989) goes so far as to suggest that social scientists cannot make satisfactory progress until they understand the philosophical issues of inquiry nearly as well as the philosopher of science.

Inquiry by its nature must have some underlying epistemology or philosophy: a set of beliefs or assumptions about the nature of the world and how we might best go about understanding that world. This brief paper will raise a number of epistemological questions about inquiry. These questions should enhance our understandings of the various perspectives represented in this collection and the relations among them. Most important, they will help us to understand whether these perspectives represent alternative ways of knowing the world, or alternative worlds.

Existence and Epistemology

My own work tends to use experimental, quasi-experimental, and correlational-descriptive methods that have been appropriated from psychology (via agriculture) and economics. Within such methodologies, I begin from the Cartesian premise that the universe, external to me, does exist. My own understanding of the universe is necessarily imperfect because of the limits of my own perceptual and intellectual apparatus, as well as my unique and necessarily skewed individual perspective. Of course, it is possible to understand a great deal about one's world just by living (our grandmothers probably know or knew a great deal about how people think or the nature of language—witness the different definitions of the word *empirical*), but the scholar, in my view, is unique because he or she tries to reach beyond the vision possible from a necessarily narrow individual vantage. The major purpose of the logical and empirical procedures of my own epistemology is to minimize error and to attempt to overcome, or reach beyond, individual limits. Many of the empirical procedures that I employ (sampling, random assignment, inter-rater reliability, etc.) are used to reduce the influence of my own biases and misperceptions.

In my study of classroom authorship activities, my attempt is to describe behaviors that actually existed—and that existed separately from my ability to perceive them. (Yes, I do believe that the tree that falls unheard in the forest makes sound or has sound potential.) However, my belief in some corporal reality outside of my own being does not mean that I, or anyone, can perceive things accurately or meaningfully. For this study, I focused on behaviors and activities that I have a personal and ideological commitment to, so it is possible for anyone to upset or recast the meaning that I found by looking in a different manner or by recalibrating the categories. A major aspect of research is trying to convince others in our community that our imperfect perception was actually correct (a rhetorical function that requires the inquirer to not only "know," but to be convincing about what is known).

In my study, since I wanted to employ teacher self-observations, how could I be certain that they would recognize the activities of interest? One of the things that I did to increase the possibility of such accuracy was to design an instrument, on the basis of previous observations, that permitted accurate coding and that did not bias teachers toward emphasizing "authorship" during the study (categories did not include only authorship choices, and all choices were presented as being equally desirable). Next, I trained teachers in the use of the instrument so that we would have equivalent definitions of behaviors. Finally, an assistant and I observed a sample of the recorded lessons to permit the computation of inter-rater reliabilities. Such procedures increased the possibility that we were not missing the incidence of actions that took place, nor was it likely that we were inventing behaviors that did not exist (even if those same behaviors could be categorized or interpreted in other ways or even ignored in other investigations). That several of us were able to see the same phenomenon consistently gives me support for the fact that I am not suffering from wishful thinking, just seeing what I wanted to. (On the other hand, such procedures might lead me to neglect some less reliable actions that might be important, also. My approaches to accuracy and validity encourage me to notice the consistent and repeatable at the expense of the idiosyncratic and particular.)

Do all perspectives share these premises? Do they all believe in the existence of a real and separate universe? And, if this autonomous universe does not exist according to a perspective, what kind of phenomenological devices are used to replace it? Do all of the approaches accept that our role as scholars is to reach beyond the basic flaws in our ability to grasp the world, or do they see the act of scholarship as one of creation or ideology (the creation of possible worlds, rather than the accurate description or explanation of existing ones)? My categories impose a bias on my results, but within my approach I do not have the right to simply arrange things to come out a certain way. I cannot, for instance, select teachers who I believe to be effective and who stress authorship, while intentionally omitting those whom I suspect would evidence a different pattern. If an approach to inquiry accepts the need for rigorous procedures to overcome the personal limits of the individual scholar, either for epistemological or rhetorical reasons, then what procedures or other apparatus are believed to be necessary to minimize this personal influence or bias?

The Quest for Truth

Another critical idea in inquiry is that of the role of truth. Historically, and popularly, science has been seen as an attempt to describe the world in accurate, nonideological terms. "Truth," the holy grail of science, is accomplished, according to such views, when we are able to accomplish this one-to-one correspondence between phenomenon and explanation. The strongest evidence of such a correspondence is usually seen as the ability to make predictions on the basis of past events.

However, this simple, and simplistic, notion of truth no longer holds sway in our communities. What is seen to be true is now believed to have its basis less in a positivistic correspondence of this type, but upon theory. Theoretical paradigms are used to guide our way of looking at the world, and they determine how we will interpret what we see. Thus, truth seeking is not a final determination of facts, but is, instead, an attempt to find correspondence between expectations and reality. In other words, there can be no final truth, except within particularly well-defined theoretical conditions.

In my study, there is only a weak correspondence between phenomenon and explanation. Although there was a significant correlation between authorship activities and critical reading (about 20 percent variance explanation with variables such as grade level controlled for), it is unknown whether my findings could transfer to other teachers and other settings. Would I be able to, on the basis of other classroom observations, predict critical reading scores? Or, if I instigated teachers to use the types of authorship activities that I observed, would the outcomes be the same? Additional studies would be needed to make these findings convincing to the skeptical, or even to make me certain that what I had "seen" actually existed.

Nevertheless, my findings are consistent with theories of social interaction and social construction (Nystrand, 1990), as well as with other investigations of literacy (Rowe, 1989). This correspondence makes my findings more interesting to my colleagues, and it can deepen my ability to understand what I have seen. Because these findings fit into a theoretical explanation, and possibly enhance this explanation, I believe that I understand what I am seeing. As encouraging as this might be, these findings do not become "true" because of this theoretical correspondence (others in my community might have it wrong, too). Theory gives my findings meaning; it helps me to interpret what I see. Nevertheless, I am required to see things that might not match with theory, too. I must array my observations in a manner that permits the rejection of theory, not just its acceptance (Popper, 1959). Whether the correspondence of phenomenon and explanation is evidence of truth or simply a rigorous rhetorical requirement of my discipline, my findings must be strengthened in this way if they are to contribute to our mosaic of "understanding."

The movement of science away from notions of truth has had varied implications on the modes of inquiry. Is truth, within a perspective, something to be arrived at through a careful and thorough delineation of theory and evidence? Or, is it more consciously an act of rhetoric? Is it both, to varying degrees, as in my own example? That is, would truth better be defined as the accomplishment of social agreement among the participants in a scholarly community? Is inquiry seen as an activity that can increase our understanding of a real world, or is it more a democratic activity in which we try to convince the community to move in particular ideological directions?

The Nature of Constructs and Operationalism

The role of operationalism and construct definition in any mode of inquiry must be understood if we are to grasp the nature of what it is that researchers try to accomplish. Our ability to understand the universe is dependent on our ability to define constructs that summarize or describe phenomena and experience in valid, reliable, and useful ways. In the physical sciences, scholars have been able to define constructs that for most practical purposes have become "closed." That is, although there might be a number of ways of measuring something like temperature, these measures are widely accepted as alternatives rather than as different or separate constructs; the implications of heat or the movement of molecules within theories of thermodynamics are widely accepted no matter what the system of measurement (a construct such as temperature would generally be considered closed even though some relevant issues concerning that construct, such as absolute zero, have not been entirely resolved). In the social sciences and the humanities, because of the nature of the phenomena that we study, we have had a greater need to rely on "open constructs," constructs that are subject to major redefinitions on the basis of operationalism. A construct like intelligence is definable and measurable in many ways, each of which can lead to different normative and substantive conclusions about the nature of the human intellect.

Because of our reliance on open constructs, the role of operationalism in our modes of inquiry is especially important. In my own work, I had to devise a classroom activity diary that would permit notions of authorship to be seen. Of course, many investigators have sought to observe classroom instruction (Durkin, 1978–1979; Florio, 1979; Good & Brophy, 1987), but these have not typically arrived at the same categories that I used. To create my observation instrument, I relied on theoretical approaches to reading-writing relationships (Shanahan, 1990); that is, I attempted to formulate variables that were consistent with various theories. It was no accident that I observed authorship and that so many classroom observation studies have ignored this in literacy. My measures are *constructs*. I constructed them to allow me to see particular types of outcomes and activities. Different measures would have permitted me to see other outcomes and activities in the same classrooms. What if I had used a more thorough measure of critical reading—having students trying to recognize craft and rhetoric rather than seeking errors? The outcomes of studies do not just happen, but they are shaped by the measures that we construct.

What kinds of measures are used in the different approaches? How are such operations arrived at? How are the operations viewed within the inquiry community? Are they reified ("intelligence is what is measured by an IQ test") or are they discussed as being conditional? What must the researcher do to convince himself or herself of the validity and reliability of the observations that result? Does the inquiry end with "findings" (something that existed that we discovered) or with "results" (something that happened because of our operations)? Within a particular inquiry community, are any constructs considered to be "closed"?

The Nature of Descriptive Language and Scholarly Communication

Inquiry has a heuristic quality; that is, participation in it can lead to greater understanding on the part of the inquirer, no matter what the tangible reportable results or findings. Formal inquiry, as participated in by professional scholars, carries with it a commitment to share outcomes with the community (however we choose to define that community). This need for communication means that our perspectives are as rhetorical as they are empirical.

The requirement that we be able to share our insights requires that we develop or adopt a descriptive language. The language that is used for telling about our results/findings is necessarily open to misinterpretation. The demands of communication, and empirical rigor, require that we make an effort to use a descriptive language that interferes as little as possible with understanding. This means that we not only must clearly define our terms, but that our measures be described in some unambiguous manner that allows others to share in the outcomes of our efforts.

In my approach to inquiry, quantification is used to reduce ambiguity. It is not enough for me to say that I saw a positive relationship between authorship activities and critical reading. I must indicate how many observations were made (between fourteen and thirty-nine lessons were observed in each classroom), specifically how frequent were the various authorship activities (authors were discussed in less than 10 percent of the lessons in which commercially published text was being read, while they were discussed about 75 percent of the time that student-written text was used), and the specific degree of relationship and significance (the likelihood of chance occurrence, not the importance) of the relationship between these activities and critical reading measure (if all teachers emphasized authorship to the same extent as was most evident here, and if this were causally linked to critical reading, then scores would improve by about 20 percent). Quantification doesn't make my observations true, and it doesn't necessarily make them more accurate. However, quantification of this type does facilitate communication by allowing those who read my work to evaluate the importance of the magnitudes of relationship that I found or the frequency of observations that I reported.

Not all modes of inquiry rely on quantification in this way, however (Smith, 1983). Why not? Is it due to the nature of the phenomena being studied or to the availability and tradition of using other rhetorical devices for facilitating clear communication? If quantification is not used, how do researchers reduce ambiguity and miscommunication when describing the universe? Does quantification, a tool for clear communication, ever lead to unnecessary confusion? Can its use be premature (see Hunt & Vipond, this collection)? Under what circumstances would quantification be considered worthwhile in a particular mode of inquiry?

(The literature has been rich with discussions of the comparative benefits or appropriateness of so-called quantitative and qualitative methods. This terminology is unfortunate because it has confused the rhetorical and communication issues with the teleological or purposeful ones. It is, however, possible to use numbers as a descriptive language in both those methods that have been called quantitative and those called qualitative. The issue of the value of statistics appears less one of summarizing information in numerical terms, and more one of the purpose of the investigation—to describe an individual event or to describe a general outcome, or more accurately, to describe an individual event relative to a set of normative probabilities.)

The Transportability or Generalizability of Outcomes

If we are a common literacy/language community that is separated by modes of inquiry, then we need to consider the relations between these approaches (Howe, 1985; Phillips, 1983). Approaches to inquiry necessarily have implications for the meaning of what we come to understand, and these implications can influence the generalizability or transportability of our findings. Are our perspectives equivalent in their ability to inform our decisions about policy, instruction, and research?

What are the relations among the various modes of inquiry? Can they all result in equally informative, rigorously derived outcomes, or are some perspectives more appropriate to the nature of the research questions being asked? At the beginning of this chapter, I suggested that dividing the field up by topics was different than a categorization by inquiry approach. However, if the different modes of inquiry are simply useful for answering different types of questions, then topic or type of questions might be the fundamental differences separating perspectives. Are some approaches right for particular problems and useless for others? Which questions or problems can be addressed from a particular mode of research? How would the different perspectives be used to approach a particular problem, such as reading disabilities or the role of author intentions in the interpretation of text? If the different perspectives are able to pose the same questions, how would the outcomes of such alternative approaches differ? And, if they proved unable to pose the same questions, what portions of the problem would each method be best for probing?

Does a stage of inquiry approach provide us with a better description of the relationship issue? That is, are particular perspectives more useful at different points in epistemological time? Is a particular approach best when theory development is weak, or little is known about a phenomenon? Does appropriateness change as we learn more about a phenomenon? Are experimental techniques best reserved for a later stage of inquiry, when we have a clearer grasp of the phenomenon under study? Hunt and Vipond's early efforts (this collection) seem an apt demonstration of the dangers of premature definition of experimental variables and conditions without adequate understanding of the phenomenon under study. Would the field be better served by studies such as Rowe's (1989) participant-observation approach to the meaning of authorship in the classroom early on, and by more intentional descriptive research approaches, such as mine, a bit later, and by rigorous experimental techniques still later? Rowe spent eight months observing the literacy interactions of three- and four-year-old children in order to describe patterns of how the children talked about literacy in general, and how they as authors specifically considered their audience's perspective.

If certain approaches to inquiry are more likely to lead to valid understanding, at least for certain types of questions or at different points in time, then what of the findings/results of the other perspectives (Firestone, 1987)? Should we treat such outcomes as being generally valid? Only valid when supportable by our own perspectives? Or are such findings "fruit from the poisoned tree," no more useful in a formal sense than our grandmothers' homely intuitions?

Rowe's (1989) approach to the issue of authorship was quite different from my own, and people who are comfortable with the methods of either of us would be somewhat disquieted by the methods of the other. Although I have cited Rowe's work positively within my own, I am not altogether certain that this is fair, honest, or reasonable. If I do not feel confident in findings that are so reliant on the observational powers of a single individual (even one who is intelligent and well-schooled), then how can I use them when they are consistent with my own? If we had opposing conclusions, would I try to explain the discrepancy as I would with a study from my own empirical traditions, or would I use her methods as a whipping post for suggesting that my own findings were the correct ones? (This works both ways, of course. I have seen ethnographers, who argue that their methods are the appropriate ones for studying human beings, resort to experimental citations when the findings matched their own beliefs.)

How should the findings from alternative methodologies be considered? Are such findings used as evidence, or as points of departure? If we use findings across perspectives, as many of us try to do, is this testimony to our belief in the validity of those approaches, or is it evidence of our own lack of understanding of the ideological or political meanings of those approaches to inquiry? Do we bear a responsibility as scholars to consider the work from other perspectives and to bring those perspectives to our own work, or at least to make sure that differences in outcome be clearly understood?

The Nature and Role of Theory Use and Creation

I once visited a local elementary school near the end of winter. Kindergartners in the school had been working on a science experiment designed to show them the relevance of sunlight to plant growth. The children planted seeds in cups of soil and added water. They divided the group of seed cups in half, placing some in a dark closet and others along the sunny windowsill. When I was there the teacher was in some consternation: the seeds in the closet had sprouted over the weekend, and the ones in the sunlight were still dormant. She was hurriedly switching the cups before the buses arrived so that the children would get the "right" result.

My first, unstudied, reaction was that sunlight probably wasn't implicated in plant growth and that the only reason any of us thought that it was is the result of the strong theories of our kindergarten teachers (who for thousands of years had switched the cups). On some reflection, I decided that the teacher, and I up to that point, had a rather imperfect notion or theory about the role of sunlight in plant growth, and that our partial theory was misleading us into believing that somehow the children had failed to come up with the "right" results. (The students were actually studying seed germination, not plant growth; heat, not light, is the issue of germination. If the March sun had provided as much heat as the dark closet, the results would likely have been different.)

Formal inquiry usually proceeds from a clearer theoretical stance, the purpose of which is to show us what phenomena are interesting, what variables and relations among variables are likely to be critical, and whether or not our empirical investigations have managed to arrive at the correct answer. In my own work, I am trying to make connections between normative social construction theory (one tenet of which is that the prototypical reader thinks about authors while they read) and social interaction theory (that holds that children learn through the communications that take place among us during shared events). I did not "discover" authorship like children discovering the cave art at Lascaux, but I went looking for it on the basis of the theories that I use. I am also theoretically compelled by a view of teaching as an intentional act. Teaching does not cause learning, but it increases the possibility of children constructing the types of skills, knowledge, and ability that we want them to have. I've selected my methods on the basis of these views (I suspect that Rowe is in sympathy with the first two theories, but that she would reject my focus on teachers' behaviors instead of children's and, thus, arrives at a very different methodology).

To understand inquiry, we need to understand the theories from which it proceeds and to which it tries to contribute. What is the nature of the theories that are used to conduct inquiry from these various approaches? What are some of the theoretical models that have been developed in each of these? How rigorous and specific are these theories in their ability to generate empirical predictions about phenomena? Is causation used as a construct?

Some of these approaches to literacy are quite new. How far are they in theory development? What is the relationship of theory to the results of empiricism? According to Popper (1959) the purpose of empiricism is to test, and, ultimately, to falsify invalid theoretical positions. (If empirical inquiry were carried out simply to demonstrate our accuracy, there would be no need for inquiry at all; our theories would already contain the truth. Therefore, from my empirical tradition, theories must be tested with a realistic possibility of eventually rejecting my beliefs.) Is falsification seen as useful, necessary, or possible as a test of the validity of theories? What role does confirmation play in theory development? What would characterize progress in understanding within these modes of inquiry? Do the theories require the development of laws or general principles, or simply the identification of critical exemplars that prove the possibility or existence of a particular phenomenon? Is the goal actually just social agreement among researchers?

Conclusions

The questions posed throughout this paper certainly do not exhaust all of the issues that we must confront in order to have a full understanding of the various perspectives and their relations. However, thinking about these questions in relationship to each of the papers presented in this volume, or in relation to one's own work, would be an effective start toward understanding the implications of these perspectives, and to increase our appreciation of the limits and possibilities of each. Only through such awareness and understanding will we move toward the creation of a field of literacy studies and ensure that our research outcomes, together, will have meaning.

It is obviously not incumbent on any of us to adopt a joint or shared perspective; such a homogenization is not likely to increase knowledge or to fuel the research enterprise. However, a research perspective is like a lens (Green, this collection). To use it properly we must have a deep understanding of *both* what we hope to see and the nature of the glass through which we consider the world. Unless we understand what our colleagues are seeing and why their vision is often so different from ours, it is difficult to claim that we adequately grasp either the world or our own lens.

References

Durkin, D. (1978–1979). What classroom observations reveal about reading comprehension instruction. *Reading Research Quarterly, 14,* 481–533.

Firestone, W. A. (1987). Meaning in method: The rhetoric of quantitative and qualitative research. *Educational Researcher, 16* (7), 16–21.

Florio, S. (1979). The problem of dead letters: Social perspectives on the teaching of writing. *Elementary School Journal, 80,* 1–7.

Good, T. L., & Brophy, J. E. (1987). *Looking in classrooms* (4th ed.). New York: Harper & Row.

Howe, K. R. (1985). Two dogmas of educational research. *Educational Researcher, 14* (8), 10–18.

Lessnoff, M. H. (1974). *The structure of social science.* London: Allan and Unwin.

Meehl, P. (1989). What social scientists don't understand. In D. W. Fiske & R. A. Shweder (Eds.), *Metatheory in social science: Pluralisms and subjectivities* (pp. 315–338). Chicago: University of Chicago Press.

Nystrand, M. (1990). Sharing words: The effects of readers on developing writers. *Written Communication, 7,* 3–24.

Phillips, D. C. (1983). Postpositivistic educational thought. *Educational Researcher, 12* (5), 4–12.

Popper, K. (1959). *The logic of scientific discovery.* New York: Basic Books.

Rowe, D. W. (1989). Author/audience interaction in the preschool: The role of social interaction in literacy learning. *Journal of Reading Behavior, 21,* 311–350.

Shanahan, T. (1989). *Authorship and critical reading.* Paper presented at the meeting of the National Reading Conference, Austin, TX.

Shanahan, T. (Ed.). (1990). *Reading and writing together: New perspectives for the classroom.* Norwood, MA: Christopher-Gordon.

Smith, J. K. (1983). Quantitative versus qualitative research: An attempt to clarify the issue. *Educational Researcher, 12* (3), 6–13.

8 A Psychological Perspective Applied to Literacy Studies

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This conference has given me the opportunity to reflect on the issues raised by differences in disciplinary perspectives. I have found it a very valuable occasion for clarifying my thinking about what I do and the particular way in which I do it. In writing about my perspective on literacy, I have tried to examine the assumptions underlying my approach to literacy studies and the sources of those assumptions. When I started, I would have been comfortable to describe myself as working largely within the current cognitive paradigm in psychology with perhaps a few personal divergences. Now I see that my perspective has more complex roots than I had thought. To explain what that perspective is, I will first provide a bit of biographical background, then I will briefly describe some of the studies I am currently working on, and, finally, I will discuss some of the influences that have shaped my perspective.

My History

Since my perspective is necessarily intertwined with my history, I feel that if I present a small amount of biographical information it will help to make that perspective clear.

As is true of many of my cognitively oriented colleagues, I came to cognitive psychology by way of the physical sciences. In high school, I was fascinated by physics. I was first hooked on the subject when I happened to read a brief history of atomic physics. The important thing, I think, was that the topic was presented not as a body of facts, but as a narrative about real people asking hard questions about nature and then struggling, sometimes against adversity, to answer them. Intrigued, I read biographies of Madame Curie, Galileo, Copernicus, and other scientists and began serious study of college physics texts.

I had no doubt that my future lay in physics because I was having such a wonderful time building spectrographs and vacuum pumps in my cellar laboratory.

Everything about physics was magical to me. I expected to love physics even more in college, but a peculiar thing happened. It soon became clear to me that the professors at Harvard whom I so admired and whom I wanted to model myself after, had no interest in involving undergraduates in research or even in talking to them very much. They were too busy earning their Nobel prizes. Until years later, I didn't really understand why my interest in physics faded and I became fascinated instead with psychology. I'm sure that this had nothing to do with the subject matter. Rather, I'm convinced it was because I found psychology professors who were willing to let me get involved in *doing* psychology. I knew I had found home when they let me have my own rat lab. Later reflection on these events that changed me from a physicist into a psychologist made me acutely aware of the important impact teachers can have on their students' lives.

Harvard psychology at the time was dominated by Skinner and his radical behaviorism. I bought into it enthusiastically. I was happy to work with pigeons and rats because I accepted the behaviorist dictum that psychology is best pursued "bottom up." Behaviorists believed that you have to understand the simple things first: conditioning in rats and pigeons before language and learning in humans. Basic research questions were strongly favored over applied ones. I accepted all of these attitudes as truth and criticized Skinner's enemies, or as I saw it, "our enemies," for their fuzzy-headedness, for their mentalism, for their failure to define their concepts operationally; in short, for their failure to be hard-core behaviorists.

I carried my behaviorist enthusiasm with me when I went to graduate school at MIT, where I studied with George Miller and was able to take courses with Jerome Bruner and anthropologist John Whiting. And I carried that enthusiasm through to my thesis, a study of the motivation of preschool children for playing games. I started my thesis believing that I could account for children's enthusiasm for games in terms of Skinner's schedules of reinforcement. I designed games in which children would be rewarded by viewing pictures, intended to entertain them, according to various schedules of reinforcement.

In one way, my results were consistent with the Skinnerian point of view. The children's interest in my games was related to the schedules of reinforcement roughly as I had predicted. In another way, though, my results were radically at odds with the Skinnerian point of view. The children were not treating my reinforcements, the pictures, in the way I expected. They weren't attending to them in the way that rats or pigeons in a Skinner box would snap up morsels of food. Actually, they hardly gave my pictures a glance. But they did have a lot of interest in discovering the rules of the game. What I found was that the children weren't being conditioned; they were enjoying a cognitive activity: problem solving.

My experience with the nursery school children made it clear to me that behaviorism wasn't the answer. I began to look for a new, more satisfactory psychology. This was 1955. I didn't have long to wait. The events that led to the cognitive revolution were already under way.

One of these events was the publication of Chomsky's devastating critique of Skinner's *Verbal Behavior* (Chomsky, 1959). Skinner had attempted to extend his conditioning studies with rats and pigeons to human language and had failed disastrously. Perhaps the behaviorists' bottom-up approach wasn't such a good idea. Another event was the publication of George Miller's "The Magic Number Seven, Plus or Minus Two" (1956). This precedent-setting paper offered the first important cognitive model; cognitive in that it explained memory in terms of unobserved mental structures and processes (a sort of mentalism the Skinnerians completely rejected), important because the limitations of short-term memory which Miller described constitute a bottleneck through which many human thought processes must pass.

The event with the most far-reaching effect, though, was Newell and Simon's powerful computer metaphor for thought (1972). Oddly, the computer metaphor had the effect of encouraging psychologists to study thought. The behaviorists believed that it was unscientific to talk about internal thought processes because they were not directly observable. Seeing that computer scientists discussed the internal information processes of their machines in respectable scientific ways, however, gave psychologists courage to disregard behaviorist strictures and consider the same kinds of process descriptions for human thought.

The emergence of the cognitive paradigm has been very important for my own research. First, it removed the pressure to adhere to the behaviorists' scientific biases. For the behaviorists, learning was the psychological phenomenon of primary interest. The central question for them was "How is that learned?" For cognitive psychologists, that is still an interesting question but it is not the only question. Cognitive psychologists are interested in learning, but they are also interested in memory, perception, representation, language, decision making, problem solving, and creativity. My own research, which has concentrated on the last three topics, would not have been encouraged in behaviorist psychology departments.

Another example of behaviorist bias is a preference for simple things before complex ones. Simple tasks, especially those shared by rats and pigeons (such as conditioning and maze learning), were preferred to complex tasks performed primarily or exclusively by humans, such as problem solving and reading. Cognitive psychology is much more oriented to studying complex human tasks than is behaviorism. It is hard for me to imagine that my own interest in the study of writing would have been received well in a behaviorist department.

A final example of behaviorist bias is the Skinnerian refusal to discuss internal mental processes. Concepts such as thought, imagery, and memory were considered unscientific by Skinner because they were not directly observable. Cognitive psychologists, building on Newell and Simon's computer metaphor, saw internal mental processes as not substantially more mysterious than internal computer processes. Thus, they felt comfortable in considering memory and imagery as respectable phenomena.

The advantages I have gained from the cognitive paradigm are not just that it allowed me to escape from behaviorist constraints. Perhaps more importantly, it has provided me with very effective tools for theorizing and for data collection, namely, information processing models and protocol analysis. Information processing models, introduced by Newell and Simon, were the central innovation of cognitive psychology. These allowed systematic descriptions of internal thought processes, the processes that the Skinnerians wouldn't talk about at all. Protocol analysis, also championed by Newell and Simon, was well suited to support the development of information processing models, because it can provide evidence of the sequence of processes people use to perform complex tasks.

The cognitive paradigm has played an important role in shaping my work in the field of literacy. Clearly, the 1981 Hayes-Flower model of written composition (shown in Fig. 1) is very cognitive in character. First, the underlying data for the model were derived through protocol analysis of writers in the act of composing. Second, the general structure of the model—that is, the top-level division of the model into task environment, memory, and cognitive processes—is borrowed quite directly from Newell and Simon (1972, p. 20 and p. 89). In addition, my colleagues and I have used protocol data in constructing cognitive process models to describe such diverse literacy phenomena as paragraphing (Bond & Hayes, 1984), sentence generation (Kaufer, Hayes, & Flower, 1986), and revision (Hayes, Flower, Schriver, Stratman, & Carey, 1987).

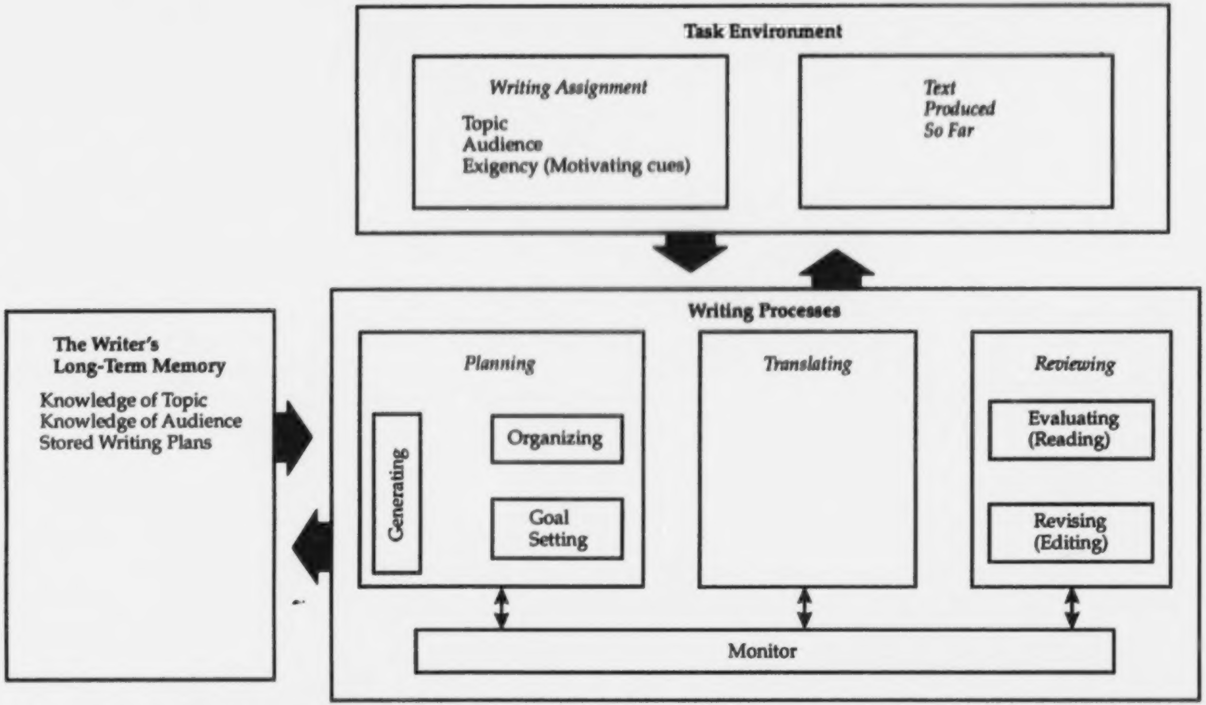
Task Environment
Writing Assignment
Topic
Audience
Exigency (Motivating cues)
Text Produced So Far
Writing Processes
The Writer's Long-Term Memory
Knowledge of Topic
Knowledge of Audience
Stored Writing Plans
Planning
Generating
Organizing
Goal Setting
Translating
Reviewing
Evaluating (Reading)
Revising (Editing)
Monitor

Fig. 1. The 1981 Flower-Hayes model (adapted)

Current Work

Three projects currently occupy most of my attention: the persona project, the textbook project, and the motivation project.

The Persona Project

Karen Schriver, Charles Hill, Jill Hatch, and I are exploring a set of issues involved in the expression of personality through writing. That is, we are interested in the relation between the writer's style and the reader's attribution of personality traits to the writer (whether accurate or not). Specifically, we are interested in the following questions: (a) Can readers agree in attributing personality traits to the writer? (b) Do personality traits projected by a text influence the reader to accept or reject arguments made in the text? (c) Do writers accurately perceive the personality traits that their writing projects? (d) Can writers be trained to perceive and control the persona projected by their texts?

To explore these questions, we have examined some 700 essays written by high school students applying for admission to Carnegie Mellon University. The applicants were asked to "tell us something about yourself that you would like us to know." All of the students were presumably motivated to present themselves in a favorable light to the admission counselors who read the essays. In examining these essays, we found enormous variability in what the students attempted to do and the skill with which they did it. Some simply listed their academic achievements. Others claimed special character traits that set them apart from other students. Still others told of personal experiences that had special significance for them. In accomplishing these objectives, some students projected positive personality traits such as creativity, high energy, and sensitivity to people, while others projected negative traits such as arrogance, immaturity, and pretentiousness. One student started his essay with the sentence "Life, as we know it, is boring." Another student said, "If you want a sharp, young female who has determination and great potential, do not look any further." Casual examination, then, suggested that the essays *did* project personality. Further, at least in the case of the essays that projected negative traits, it appeared that the writers did not fully perceive the persona they were projecting.

Casual impressions, however, can be misleading. We felt that we first had to establish clearly that independent judges could agree in attributing personality traits to authors on the basis of their texts. To do this, each of three investigators selected twenty essays that seemed to them to project some personality traits. The sixty essays were then independently evaluated by the three investigators for the presence of thirty personality traits. The resulting judgments showed very significant agreement among the judges. Thus, our first question, "Do readers agree in attributing personality traits to authors on the basis of their texts," was answered affirmatively.

As a first approach to answering our second question (Do personality traits projected by the writer's text influence readers to accept or reject arguments in the text?), we selected twenty essays that we had agreed projected either pleasant or unpleasant persona. We then asked eight admission counselors at Carnegie Mellon University (the intended audience for the essays) to evaluate the essays for purposes of admission. They were told that all twenty essays were written by students who had been wait-listed, that all had about the same academic credentials, and that only ten could be admitted. After the admission officers reached their conclusions, we found that the decisions were significantly correlated with the quality of the projected persona. Essays projecting pleasant persona received twice as many "admit" votes as essays projecting unpleasant persona. Persona, then, does appear to influence the reader's acceptance of arguments of the form "I'm a good candidate for your college because . . ."

We don't view our second question as yet being close to "nailed down." To arrive at a more satisfactory answer, we plan to take the following steps:

1. We will collect think-aloud protocols from judges evaluating essays for projected personality traits.
2. We will use the protocol data to identify text features that trigger particular personality judgments.
3. We will take argumentative essays which are relatively neutral in their projection of personality traits and modify them by adding text features that trigger pleasant or unpleasant personality judgments.
4. We will determine whether or not readers' acceptance of the authors' argument is influenced by the induced personality judgments.

We suspect that the answer to our third question is that inexperienced writers may often fail to perceive the persona that their texts project. Why else would they write essays that are apparently counterproductive? In order to answer this question, we plan to interview the students who wrote the essays and ask them to judge the projected persona of their own and other students' essays, from the point of view of the admission counselors. We expect that students will be less sensitive in perceiving projected personality traits than more experienced writers. Further, we expect that freshmen will have special difficulty in judging their own texts as compared to the texts of other freshmen.

The fourth question, "Can writers be trained to perceive and control the persona projected by their texts," is the most difficult one to answer. In attempting to answer this question, we will provide writers with the judgments of their personality traits that others made when reading their texts. Our hypothesis is that this exposure to readers' responses will help to sensitize writers to the impression their texts create.

The Textbook Project

A second project, being conducted with Philippa Benson and Rebecca Burnett, concerns the production of effective high school science textbooks. The project addresses two questions: (a) Which text features help students to understand the topic and which confuse them? (b) How can we assist writers and editors to produce more useful texts?

We were surprised to learn that when publishers evaluate textbooks, students, the real audience, are never directly involved. Rather, publishers ask a selected group of teachers how they think the textbook will work for students. Although getting teachers' opinions is a step in the right direction, we feel that reasonable evaluation of texts must be based on the direct and systematic observations of students trying to learn from text. Thus, to answer our first question, we are conducting protocol studies of high school students attempting to learn about biology by reading their texts.

To answer our second question, we have begun to explore how writers, editors, and designers deal with text problems. An earlier study (Hayes, Schriver, Blaustein, & Spilka, 1986) indicated that the writer's own knowledge of the topic can interfere with his or her ability to understand what would confuse the reader. Philippa Benson is comparing the responses of editors, graphic designers, and teachers who were asked to improve a section of a text that includes both pictures and words. Preliminary results have been striking. Teachers and editors try to improve the words. Designers try to improve the graphic features of the text. No one considered it their job to deal with the relations between the two. One of our major objectives is to help overcome problems such as these, which make it difficult for writers, editors, and graphic designers to recognize and address problems that make texts hard to understand.

The Motivation Project

A third project with which my colleagues Karen Schriver, Charles Hill, Jill Hatch, and I are involved is a study of motivation in writing. This project is consistent with a long-term interest in motivation which many of us share. More specifically, it was triggered by observations we made during a teaching study in 1989. As part of a project to teach students to detect wordiness in text, we developed a computer-based instructional package (Hayes, Schriver, Hill, & Hatch, 1990). To test this package, we asked basic, average, and honors students to participate in a pretest, an hour of instruction for three successive days, and a posttest. In the course of doing this testing, we noticed that the basic students differed from the average and honors students in the extent to which they engaged in the instructional activity. Thirty-eight percent of the basic students failed to take the posttest, in contrast to 4 percent for the average and honors students. Further, the basic students turned up for fewer of the computer-based training sessions than did the average and honors students, and when they did turn up, they engaged less fully in the sessions than did the average and honors students. By engaging, I mean participating actively, whether successfully or not. When the basic students engaged in the instructional activity, they appeared to gain as much as did the other students. However, about 60 percent of the basic students engaged at such a low level in the instruction that little or no improvement could be expected. Clearly, the motivation to engage in instruction is a critical factor limiting its success. No matter how potentially beneficial an instructional activity is, it won't help students who don't engage in it.

We hypothesized that the basic students might be more distracted than others by outside pursuits such as the need to earn a living or pressures to engage in sports, but this wasn't the case. We thought that perhaps basic students disliked computers or undervalued English courses more than other groups, but this also proved false. Our first attempts to understand the differences between the basic students and the others ended in complete failure. In short, none of the factors that we thought might explain the differences in motivation actually did.

At present, the project is in a very early stage of development, focused as it is on this single phenomenon: the failure of basic students to engage in computer-based instruction. Our current efforts in this project are aimed at obtaining a better understanding of the basic students' beliefs and attitudes toward instruction and at designing instructional techniques that will lead basic students to engage in instruction at the same level as average and honors students.

The Cognitive Paradigm and the Rhetorical Tradition of Psychology

What I have said up to now is accurate. The work I have done in the field of literacy clearly bears the imprint of the cognitive paradigm. But that doesn't tell the whole story. The way I approach literacy studies depends importantly on the cognitive paradigm, but it depends even more importantly on psychological tradition generally. It is easy to dismiss earlier psychologies as irrelevant to current thought, as paradigms that have been tried and found wanting. We dismiss the structuralists because we no longer believe that a psychology can be constructed entirely from subjective observation. We dismiss Gestalt because we find its visual metaphor for thought too narrow. We dismiss the behaviorists because their anti-mentalism and their focus on learning seem unnecessarily constraining. However, it is easy to overemphasize the radical nature of paradigm shifts. Paradigm shifts in psychology have caused extensive refocusing, but they have not been absolute. While much is abandoned in a paradigm shift, much is also saved.

It is hard for us to stand back and see that much of our everyday practice as cognitive psychologists is actually borrowed from earlier psychologies. Our approach to problems, the familiar research methods we use, and the standards for argument we apply were honed by experimenters in research traditions that are no longer popular, that is, by behaviorists, structuralists, and Gestalt researchers. Practitioners of these earlier psychologies have faced the same sorts of problems that we now face. In their attempts to understand thought and behavior, they have assembled a rich body of observational methods and have established high standards for argument based on data. These methods have continued to be useful despite paradigm changes. The basic psychophysical methods and the reaction-time methods were invented by structuralist psychologists. Many of the standard experimental designs described by Campbell and Stanley (1963) and many of the statistical methods now in use were borrowed by behaviorist researchers from the agronomists who developed them for application to agricultural research. Standards for argument in psychology such as those described by Huck and Sandler (1979) have developed not just during the current paradigm, but throughout the history of psychology. We draw on these methods and these standards continually and unconsciously in our everyday research pursuits.

I propose to characterize this legacy of attitudes, methods, and standards for argument as *psychology's rhetorical tradition*. I call it rhetorical because it is centrally concerned with argument and persuasion. It is the framework that guides psychologists when they try to convince an audience of peers that their claims are plausible, as well as a standard against which arguments are judged. Psychologists who do not meet the standard—by failing to recognize confounding variables, by omitting needed control groups, by using inappropriate statistical methods—are criticized or, more to the point, their arguments are rejected as unconvincing.

To be more specific about the content of the rhetorical tradition in psychology, I believe it includes at least the following:

> A belief that empirical observations can provide a very effective basis for assessing claims. It is symptomatic of this belief that I frequently find myself responding to claims by trying to imagine empirical observations that could support or refute them.
>
> A willingness to consider quantitative approaches to theory and to data analysis. Certainly, even among the earliest psychologists, there were many who were willing to search for mathematical expressions of psychological principles (for example, see Boring's discussion [1950] of the contributions of Herbart, Weber, and Fechner). Again, it is symptomatic of my involvement in this tradition that in the persona study, I resolved a difficult data analysis problem by writing a computer simulation program to evaluate the reliability of the judgments. You don't do that kind of thing if you think that numbers are "the great Satan."
>
> A well-developed set of methods for collecting and interpreting data. Although empirical methods are often popularly viewed as ways of proving assertions, they really have nothing to do with proof, as Mill (1877) has pointed out. Rather, they should be viewed as methods for convincing people of the plausibility of claims. Some of these methods are listed here.
>
> —Reliability measures
> —Replication
> —Triangulation
> —Randomization
> —Counterbalancing
> —Choice of study designs
> —Control groups

—Statistical methods
—Hedging

A well-developed set of sensitivities to factors that may invalidate empirically based arguments. These sensitivities require the researcher to be alert to the myriad factors other than the hypothesized ones that can create pattern in our data. Some of these factors are listed in Figure 2.

If my view is correct, it would be appropriate to distinguish between two levels of description in discussing the history of psychology: a *paradigmatic* level and a *rhetorical* level.

Reliability of Observations
- Unreliability within and between observers
- Systematic drift (e.g., fatigue)

Effects of the Act of Observing on the Observed
- Observer bias in the treatment of the participants
- Observer bias in the perception of the results
- Participant responses to observation (e.g., the Hawthorne effect, the placebo effect)

Distortions in the Observing "Window"
- Sampling bias (applies to participants, materials, and contexts)
- Problems with self-report (e.g., telling the observers what they want to hear)
- Shared participant experience (e.g., the problem of using intact classes)

Unaccounted Changes in the Observed
- Maturation (e.g., changes in the participants due to age and experience)
- Order effects
- Testing effects (e.g., the second test is typically better than the first)
- Differential dropout rates for treatment and control groups
- Regression to the mean

Unwarranted Inferences from Observation
- Generalizing beyond studied context
- Inferring causation from correlation
- Generalizing from small samples (e.g., drawing negative conclusions from studies with low statistical power)

Fig. 2. Psychology's rhetorical tradition emphasizes sensitivity to these factors, which threaten the acceptability of empirical arguments.

At the paradigmatic level of description, psychology might be seen as a sequence of mutually incompatible schools, each school replacing earlier ones in revolutionary paradigm shifts. With each shift, much of the content of the earlier paradigm is either reinterpreted or becomes irrelevant. Thus, in 1950, much psychological journal space was devoted to descriptions of animal experiments designed to test Hull's stimulus-response theory of learning (Hull, 1943). Since the shift from the behaviorist to the cognitive paradigm, this very large body of research is rarely referenced. It is seen as irrelevant to the new paradigm which is focused on research designed to test information-processing models of human thought.

At the rhetorical level of description, psychology is a loosely integrated collection of argumentative practices which psychologists employ in the process of attempting to persuade the psychological audience of the plausibility of psychological claims. These practices include experimental designs, statistical methods, and standards for argument. Rather than exhibiting revolutionary change, these practices appear to have evolved in a relatively continuous way over more than a century of psychological investigation. Each school of psychology, though rejecting the paradigms of other schools, seems to share quite freely in their argumentative practices. Thus, at the paradigmatic level, psychology appears to be a sequence of relatively disjoint programs, each emerging by revolutionary rejection of earlier programs, *but at the rhetorical level, it appears to be a continuously evolving array of argumentative practices*. The continuity of the rhetorical tradition is supported by a relatively stable system for transmitting the argumentative practices: required courses in statistics and experimental design, the apprenticeship of graduate students, and criticism by editors and peer reviewers of papers submitted for publication.

I view this rhetorical tradition, the legacy of methods and standards for argument, as the most valuable intellectual product of the psychological enterprise—more valuable, indeed, than any body of theory or fact. In my exposure to anthropology, I recognize a parallel tradition of adherence to high standards for method and argument for interpreting observational data. In the field of literacy research, I feel that the factor that most sharply differentiates more effective from less effective researchers is their participation or nonparticipation in a strong rhetorical tradition for interpreting empirical results.

Although I find the cognitive paradigm and the rhetorical tradition of psychology extremely useful for conducting studies in literacy, I feel that neither is perfectly attuned to the needs of the literacy researcher. The rhetorical tradition of psychology has placed heavy emphasis on experimentation and has seriously undervalued exploratory studies. Symptomatic of this undervaluation is Campbell and Stanley's dismissal of case-study research as being "of almost no scientific value" (1963, p. 6). But surely the observations that give rise to hypotheses should be considered as important as the observations that we use to test them.

If an extraterrestrial were to land among us, we would certainly want to study it, even though it provided only a one-shot case study. Study of the case couldn't lead to any firm conclusions about extraterrestrial life in general, but it could provide some pretty interesting hypotheses. At the present state of literacy studies, exploration and hypothesis formation may be more important than hypothesis testing.

A major deficiency in the cognitive psychology paradigm for literacy researchers is its failure to address issues of motivation. Hilgard (1987) notes that with the advent of the cognitive paradigm there was a decline in attention to motivation. He attributed the decline in part to the fact that cognitive theories are not based in physiology and that the study of physiologically based drives has been a traditional source of interest in motivation. Whatever the reasons for the omission, cognitive psychology definitely has not focused on motivation. However, because motivation is of such urgent concern in the field of literacy, literacy researchers cannot afford to ignore it. Developing an effective approach for studying motivational issues must be a high priority for literacy research.

Strong rhetorical traditions for interpreting empirical results are extremely valuable tools for literacy researchers. Without such traditions, meaningful dialogue among researchers is difficult and progress toward the very important goals of the field is slow. Fostering strong rhetorical traditions requires effort. Graduate students can't be expected to absorb such traditions in a one-semester course. We have to provide them with substantial training and apprenticeship. Journals can help by insisting on reasonable standards of argument. With a strong rhetorical tradition attuned to the needs of literacy researchers we might hope to make faster progress in understanding some of the urgent problems we face.

References

Bond, S. J., & Hayes, J. R. (1984). Cues people use to paragraph text. *Research in the Teaching of English, 18,* 147–167.

Boring, E. G. (1950). *A history of experimental psychology.* New York: Appleton-Century-Crofts.

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research.* Boston: Houghton Mifflin.

Chomsky, N. (1959). Review of *Verbal behavior,* by Skinner. *Language, 35,* 26–58.

Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication, 32,* 365–387.

Hayes, J. R., Flower, L., Schriver, K. A., Stratman, J. F., & Carey, L. (1987). Cognitive processes in revision. In S. Rosenberg (Ed.), *Advances in applied psycholinguistics: Volume 2. Reading, writing, and language learning* (pp. 176–240). Cambridge, England: Cambridge University Press.

Hayes, J. R., Schriver, K. A., Blaustein, A., & Spilka, R. (1990, March). *If it is clear to me it must be clear to them.* Paper presented at the meeting of the Conference on College Composition and Communication, New Orleans.

Hayes, J. R., Schriver, K. A., Hill, C., & Hatch, J. (1990, March). *Seeing problems with text: How students' engagement makes a difference.* Paper presented at the meeting of the Conference on College Composition and Communication, Chicago.

Hilgard, E. R. (1987). *Psychology in America: A historical survey.* San Diego: Harcourt Brace Jovanovich.

Huck, S. W., & Sandler, H. M. (1979). *Rival hypotheses: Alternative interpretations of data based conclusions.* New York: Harper & Row.

Hull, C. L. (1943). *Principles of behavior.* New York: Appleton-Century-Crofts.

Kaufer, D., Hayes, J. R., & Flower, L. S. (1986). Composing written sentences. *Research in the Teaching of English, 20,* 121–140.

Mill, J. S. (1877). *A system of logic* (8th ed.). New York: Harper. (Original work published 1843)

Miller, G. A. (1956). The magic number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review, 63,* 81–97.

Newell, A., & Simon, H. A. (1972). *Human problem solving.* Englewood Cliffs, NJ: Prentice Hall.

9 Some Issues Concerning Differences among Perspectives in Literacy Research

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There is a prevalent belief that science can be conducted as a dispassionate, objective, value-free endeavor. Beginning with Kuhn's (1962, 1970) work, a new realization has become apparent. Science involves choices among methodologies, problems, and interpretations. A researcher may be disposed to study some problems rather than others. Methodologies can be chosen arbitrarily or maintained out of habit. Interpretations of data and construction of theory are clearly colored by predispositions. In the following discussion, the word *perspective* has been used as a collective description of what a researcher believes, in the most global sense, about the domain to be studied. The term *perspective* is intended to be more inclusive than the notion of paradigm introduced by Kuhn. While this discussion is framed in the context of literacy and literacy research, it might easily be generalized to other fields of study.

Perspectives and Issues

Literacy research perspectives usually address the following issues:

1. The nature of reality as it relates to the acquisition, use, and instruction of literacy and literacy skills.
2. The nature, acquisition, and structure of general knowledge about literacy. These are general epistemological issues that relate to how individuals come to know about literacy.
3. The nature, acquisition, and structure of scientific knowledge and theory concerning literacy. These are different from the general epistemological issues; this set of issues relates specifically to the scientific enterprise rather than to common knowledge.
4. The consequences of individual differences (i.e., individual group descriptions) for literacy use, acquisition, and instruction.

In adopting a particular perspective, researchers need to select certain methods for studying literacy, choices limited by certain theoretical assumptions or lines of reasoning. It is impossible to avoid many consequences of choosing, even if a researcher might want to try not to make choices.

Consequently, an overriding concern is the identification of a perspective. What makes a perspective "cohere" as a unique entity? Are there necessary historical precedents for perspectives? How great a difference among "idio-perspectives" (the instantiation of a general perspective by an individual researcher) is required before each has to be considered a distinct perspective? Can perspectives be mutually intelligible?

It is not a simple task to identify what a perspective must or should be. The following sections each deal with a different facet of perspectives related to the many variables that should be considered in formulating or arguing from a perspective. Often, there are questions rather than answers. The questions are useful in stimulating thinking about problems rather than implied solutions to them.

Level of Detail in Perspectives

An important issue is the breadth of a perspective on literacy research. Does a research perspective have to encompass a broad range of phenomena? Or can it simply focus efforts on a smaller slice of reality?

These questions lead into the difficult problem of complete versus partial determination of phenomena. That is, if an explanation includes *all* possible factors influencing an event or outcome, it is said to be fully determined. If the explanation does not include all those factors, it is incomplete, or partially determined. Literacy research perspectives seem compelled, on a theoretical basis, to focus on a full range of literacy phenomena. On a pragmatic basis, however, literacy research seems more effective when conducted on narrower ranges of phenomena. If it is more efficient to study these phenomena in "smaller pieces," then each of the small pieces, when put together, should account for the broad range of events. This line of reasoning implies that no single perspective can take the position of excluding some phenomena without specifying some way of ultimately including them in the explanatory structure (or theoretical account) of the relevant domain.

Related to the questions about breadth are questions about how explicit a perspective should be. A perspective obviously does not have to be as explicit as a theory, but what level of detail is required?

Is it sufficient to describe events at a macro level of observation? Or must every perspective ultimately resort to a microdescription of the chain of events that leads to a literacy phenomenon?

Psychological versus Social Components of Literacy

Is there a psychological "reality" to literacy phenomena that can be separated from social influences or social contexts? Can we determine whether literacy phenomena have psychological components that are different from the social/interpersonal components? Literacy seems inherently a social process. Except for writing notes to oneself, making entries in a diary, and similar activities, most literacy phenomena require the existence of another individual. Even in the cases of "private" communications, many social psychologists would argue that individuals act as if they were two different personas.

Language is a social "agreement" to use certain conventions for communication. While much of language processing is certainly conducted at a psychological or cognitive level, there is an obvious need to include social causal factors in scientific explanations. Since many processes do take place at the psychological level, cognitive processes related to literacy seem heavily weighted on the side of the "private" world of an individual. We have accumulated ample evidence that neither the psychological nor the social aspects are sufficient in themselves for a complete description of literacy phenomena.

Perspectives must question whether it makes sense to study the psychological processes of literacy apart from the social components. Can it be done? Can some parts be studied and others not? If so, are the results obtained from a psychological perspective usable in instructional or other "social" contexts?

While these questions may not have compelling theoretical answers in all perspectives, clearly there are researchers who pragmatically study literacy from a purely psychological or purely social framework. Such a course of action will lead to difficulty if researchers assume there is nothing more to be added—that the psychological or the social component is the only important source of scientific data in explanations of literacy.

Compatibility among Perspectives

Do the results from research with one perspective have to be compatible with results from other perspectives? Can they be at odds? Can they coexist with small discrepancies? Related to this is the question of whether a perspective can be a combination of different types of research purposes, aims, perspectives, and the like. How similar (or related) do the various assumptions of a perspective have to be to represent a single, coherent perspective?

Goals of Perspectives

There is also a need to consider the uses of perspectives for scientific or political/policy/social ends. For example, the use of schema theory as a scientific theory can be easily questioned (Pascual-Leone, 1980), but it has been used to focus important energies and resources on reading research. So schema theory serves an important function, even if it is not one that contributes directly or immediately to the acquisition of accurate scientific knowledge about literacy. Other perspectives can focus on educational exceptions to draw attention to and attempt to collect information on a class of problems that might otherwise be ignored.

This idea requires a dual view of science and research. Science is, at one level, assumed to be the dispassionate collection of knowledge about the world. At another level, science does make available different kinds of data that are useful for policy and political purposes. Whether these are a priori or a posteriori functions of science is debatable. Scientific data can be used to justify policies that were going to be implemented anyway, or they can be used to create or rationalize policies to achieve desired ends. Perspectives often reflect the ends or goals of the research, and it is critical that anyone adhering to a perspective be aware of those ends.

Some research perspectives will have the additional problem of interfacing with policy perspectives. The degree to which research perspective goals match policy perspective goals will be important in determining which problems are studied, how much funding will be available, who will be supported in research efforts, and the ultimate sources of funds. It is important to be aware of the line where policy begins and science ends. Scientific data can also be affected by this interface between policy and research perspectives. In addition, the application of research findings by policymakers may have consequences unintended or not considered by researchers.

While the preceding discussion has not resolved the question of defining or identifying perspectives, it has raised major issues. By considering the questions posed, we can guide our use of the term *perspective* in a more productive manner. The following discussion of evaluating perspectives presupposes that we can establish criteria for identifying perspectives.

Evaluation of Perspectives

To evaluate perspectives, we have to ask about the utility of information and research derived from different perspectives. Is there differential utility of the information produced from different perspectives for research and scientific knowledge? instruction and schooling? policy? These are pragmatic criteria, not theoretical ones.

How can the utility of information be evaluated? Since this question is often bound to the assumptions of the paradigm, cross-perspective sensitivity issues are crucial in evaluating the utility of information. This suggests that there is an objective reality to which all perspectives can refer. This pragmatic assumption merely reflects the fact that most of what we do and believe in language and thought is held in common among most individuals. If we cannot explain what we do or find across different perspectives, we can have little or nothing in the way of usable, accumulated knowledge. Our very acts of speech and communication become futile. If we want to reflect how the world actually works, we need to take account of the fact that persons usually act as if there were an objective and mutually understandable reality undergirding all observable phenomena.

The criterion can be stated as a "test": If the results or implications of research or theory are not explainable so that anyone else can understand them, they are simply not useful.

Criteria for Evaluation of Perspectives

We seem to be in a particularly disabling period of time in terms of justifying or systematizing our research efforts. We are, as a community, engaging in much research, but we seem to be fixated on data. We spend relatively little time determining what our data *really* mean. We need to spend more time dealing with the theoretical and less time at the empirical data level. If this requires closer examinations of the underlying assumptions and precise consequences of one's conclusions, so much the better. If this requires less data collection and more thoughtful reflection of the meaning, consistency, and explanatory value of data, so be it. Too often we examine such a small portion of what interests us that our conclusions cannot possibly be generalized to the larger domain, much less to the "real" world. And yet, almost every piece of literacy research comes complete with its "implications for instruction." This is a pernicious trend that, at best, undermines the credibility of the research effort. At worst, it leads to erroneous applications of practices that were only minimally, if at all, supported by a narrow research effort.

Some assumptions that underlie the following discussion are that there is an objective reality, that communication among and between researchers (and other persons) is possible, and that the ultimate goal of science and research is the production of knowledge. At base, this set of assumptions relies heavily on a scientific pragmatism: if we are to discover things about the world, those methods that do it more effectively and efficiently are in an urgent sense "better."

There are presently no formal criteria for what constitutes a perspective, as opposed to criteria for more formal entities like theories or hypotheses. This issue needs to be addressed urgently. Until it can be determined what makes a perspective an identifiable entity, little progress can be made in evaluating perspectives. Not only do we have to be able to identify what a perspective is, we have to be able to distinguish one from another, without reference to the advocates of the perspective stating "this is *my* perspective."

The following is a proposed set of evaluative criteria for perspectives. This proposal assumes that we can identify perspectives, despite the caveats in the preceding paragraphs. These are intended as a first approximation, to be refined when definitions of perspectives have been sharpened. This proposal deliberately sidesteps the complexities of that issue for now.

The Criteria

Scope. A perspective is to be preferred if it comprehensively deals with the phenomena in its domain. While a perspective does not have to deal with all phenomena in its domain, perspectives that have a larger scope are preferable to those with smaller scopes. A subcriterion is that perspectives should provide a complete account of the phenomena under study. If a perspective chooses to focus on one or a few aspects of a domain, that focus should not produce results that are contradictory to data collected on other aspects of the same domain. This last issue is related to the next criterion.

Consistency. If the perspective leads to an internal contradiction or an absurdity, it is flawed. In short, any time a perspective admits of contradictory data (without explaining or rejecting some of those data), it is invalid. This represents the criterion of internal consistency. If the perspective requires the invalidation of other data we know to be true, outside its domain, it is externally inconsistent. That is, any knowledge gained from a perspective must be consistent with what we have obtained from other perspectives, unless it can be demonstrated that one or the other piece of knowledge is somehow flawed. Moreover, a perspective must have a mechanism for resolving disagreements among observers on what the phenomena are. When observers disagree about a phenomenon, the perspective must specify a method or methods by which the dispute can be settled.

Scientific utility. If the perspective leads to predictions, confirmable by research, it is useful. The more different, confirmable predictions a perspective yields, the more useful it is. If there are not conditions under which the perspective could be validated or invalidated, it lacks scientific utility. In that case, the perspective has become faith rather than science.

Simplicity. This is otherwise known as Occam's Razor: entities should not be multiplied unnecessarily. Simpler perspectives are always preferable. Perspectives that resort to complex explanations, require the creation of hypothetical constructs, or make reference to nonexistent or unobservable entities should be suspect. While this is an extremely difficult criterion to apply, it is a necessary condition to prevent flawed perspectives from being shored up by the invention of complex or fanciful explanatory devices. This is related to the question of utility discussed earlier. The more complex, strained, or fanciful an explanation is, the less likely it is to be useful.

Distortion. If the perspective does not introduce distortions of the data, it is to be preferred. By implication, perspectives that introduce less distortion are preferred to those that introduce more. While this introduces a notion of objectivity that may be rejected by some perspectives, it is important to know when and if a perspective systematically (or unsystematically) distorts reality. Without this criterion, the notion of resolving disagreements over observations or phenomena is futile.

Presumption. A perspective cannot assume itself as essential to the understanding of itself or of phenomena in its domain. If we do not make this assumption, we can never devise an independent criterion against which to measure progress in terms of the accumulation of knowledge.

Stimulation. A less formal evaluative criterion is that a perspective should stimulate research and the acquisition of knowledge. In this regard, some perspectives that might not meet the more formal evaluative criteria, described earlier, do prove useful. An illustrative case is the use of schema theory as an *explanation* of reading comprehension. Several paradoxes and internal contradictions are present in the various formulations of schema theory (see Bereiter, 1985; Pascual-Leone, 1980). Yet, schema theory has certainly stimulated much reading research over the past two decades. Schema theory rates high on this criterion though it is low on others.

Summary

Several criteria are presented as starting points to formulate evaluations of perspectives. We need to ask whether all perspectives are equally valid. The several dimensions suggested here will allow for comparisons and contrasts among perspectives in important ways. Developmental work in refining perspectives should result in stronger, more coherent perspectives, and consequently, accelerated scientific progress.

References

Bereiter, C. (1985). Toward a solution of the learning paradox. *Review of Educational Research, 55,* 201–226.

Kuhn, T. (1962). *The structure of scientific revolutions.* Chicago: University of Chicago Press.

Kuhn, T. (1970). Logic of discovery or psychology of research? In I. Lakatos & A. Musgrave (Eds.), *Criticism and the growth of knowledge,* (pp. 1–23). London: Cambridge University Press.

Pascual-Leone, J. (1980). Constructive problems for constructive theories: The current relevance of Piaget's work and a critique of information-processing simulation psychology. In R. H. Kluwe & H. Spada (Eds.), *Developmental models of thinking* (pp. 263–296). New York: Academic Press.

III Specific Disciplinary Perspectives on Literacy Research

10 Changing Views of Language in Education: The Implications for Literacy Research

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In order to answer the question about the ways in which language has entered into studies in education over the past decades, we will begin by defining what we see as the relevant issues and then go on to discuss the theories, methods, and findings, keeping in focus their relevance to literacy. For it seems to us that the study of literacy is the key to understanding the relationship of language both to schooling as a process and to the role of education as a major institution of social change in this century. The recent history of linguistics and sociolinguistics in research in education has been to seek answers for issues of equity in educational experience. The assumptions of both values and methodological process are intrinsically related to the study of the ways in which social equality can be enhanced through education. Our own disciplinary approach—that of interactional sociolinguistics—will, we hope, be seen in this short text as a response to this recent history. Over the past twenty-five years, sociolinguistics and education have entered into a methodological and intellectual dialogue that has significantly changed both our views of language and our theories of how language enters into school learning processes.

Literacy, Language, and the Problem of Differential Learning

Disappointments with the growth of literacy rates and with society's failure to achieve universal literacy after nearly a century of increasing educational effort have been taken as indicative of a major crisis in schooling over the past few years. We know that such crises are not completely new. They seem to recur at regular intervals in history (Resnick & Resnick, 1977). While explanations for this failure vary, the majority of the critics return to some version of the differential learning issue as the problem that lies at the heart of public education: why is it that children exposed to similar school instructional experience appear to show different levels of educational achievements (Mehan, 1989)? And perhaps more significantly, why, after decades of increasing expenditure, do differences in literacy and educability persist (Hansot & Tyack, 1982)? The reason for the centrality of literacy and language is easy to see: for more than a hundred years, literacy has been seen as the basic skill, ability, mode of discourse—each term engages a different ideological realm—upon which all other schooling achievements must rest. What is meant by literacy, however, is far from clearly specified. It counts as the skill that not only defines an educated person but, more importantly, an educable one. That is, literacy becomes a measure of educability of both individuals and social groups, and any limitation in an individual's or group's literacy suggests flaws in the educational system. The heart of the current literacy crisis is the dramatic decrease in the test scores of minority and low-income children after the first few years of schooling (Ogbu, 1988). Test performances show that the achievement gaps between middle- and low-income children increase with grade level. This suggests the need for studies of the schooling process that can provide a better understanding of the role of language in educational experience, and especially how a sociolinguistic and linguistic perspective can serve to clarify this role.

To understand the contribution that current research can make, it is necessary to begin with a brief historical recap of earlier issues, issues that we will show are still relevant. Thus, questions of language usage which in the past were the subject of great controversy, and at the time seemed to have been resolved, now reemerge within the context of the back-to-basics movement and the political debates over bilingualism and "English only" (Hakuta, 1986; Nunberg, 1989).

From Linguistic Deficit to Cultural and Linguistic Difference: The 1960s

Earlier in the century, thinking on literacy and schooling rested on the assumption that learning was basically accomplished through classroom instruction. Policy-makers and educators had traditionally believed that while children come to school with different social backgrounds and while these differences can, under some circumstances, be seen as providing an initial handicap, what counted was the curriculum and how it was presented (Graham, 1980). In the last three or four decades, explanations for differential learning have increasingly turned away from this limited, instrumental view of learning to point to factors and experiences outside of school instruction itself in order to explain what happens inside the school. Explanations have covered a wide range: seeing children's backgrounds as merely a minor handicap that can best be ignored in classroom practice, claiming that differences are a problem that must be dealt with and overcome in the early years if larger learning problems are not to result later, and, more recently, seeing cultural diversity as a positive factor that serves to enrich classroom experience. Similarly, the history of linguistic and sociolinguistic involvement with education is the history of how we have transformed our earlier view of language into one where language both serves to convey academic content and at the same time sets or constitutes the environment in which learning takes place.

The changes we refer to were influenced by what were initially three separate research traditions: anthropologists' ethnographic studies of urban poverty, psychologists' research on parenting, and educators' observations on what they saw as serious gaps in children's command of English grammar. Cultural anthropologist Oscar Lewis (1966) and, following him, sociologist Nathan Glazer and urban planner Daniel Moynahan, had argued that the economic and environmental decay of inner cities and the prevailing poverty had led to the breakup of family structures and the loss of "traditional" values. The resulting culture of poverty, they claimed, had brought about a condition of "cultural deprivation" among inner-city children which prevented them from benefiting from schooling. Developmental psychologists, on the other hand, basing themselves on small-group experimental studies, had suggested that social classes and cultural groups differed in styles of parenting and that these differences in large part accounted for children's educational outcomes (Hess & Shipman, 1965). In educational practice the argument took still a different form. School psychologists and educators who had noted what appeared to them as minority students' poor pronunciation and grammar, as well as their inability to form complete sentences and express themselves in clear English, concluded that these students must also lack adequate reasoning skills. They came to regard such "language deficiencies" as the major cause of elementary school failure.

Putting together these three lines of argument, we can reconstruct a rationale for what, on the model of the anthropologists' term "cultural deprivation," has come to be known as the "linguistic deprivation" hypothesis. The claim was that the cultural environment in which many low-performing, minority-group children grew up did not provide adequate exposure to adult talk, resulting in inadequate command of basic English grammar. Because of their supposed lack of grammar, the same children were also seen to lack the cognitive or verbal bases they needed in order to assimilate what they were taught in school.

It must be pointed out that this concern with the child's home environment as the main influence on educational outcomes had originally been seen by its proponents as a response to earlier views on the biological inheritability of talent. The orientation was part of a new movement to counteract the cultural biases of views of educability that used IQ testing to support claims that differential schooling outcomes could be explained solely in terms of inheritance of talent, an issue with a history throughout this century (Gould, 1981). It was this biological determinism, and its connotations of racial prejudice, that was attacked by those who understood that cultural difference shaped ability through a variety of differentiated experiences. Thus, the focus on the consequences of differing styles of parenting and on the effects of the poverty cycle can be seen as at least a liberal reform option through which remedies could be sought through educational programs (DeLone, 1979).

In fact, a variety of remedial programs were initiated in this period to make up for the supposed deficiencies. Some, such as the well-known Head Start Project, provided preschool training for cultural enrichment to redress the supposed lack of home stimulation. Other programs taught basic English and relied on grammar and pronunciation drills in standard English, on the assumption that children must catch up on basic oral skills before being exposed to more advanced reading and writing instruction. While these programs had some success, they also met with serious objections from minority-group members who saw their own valued cultural traditions being neglected, as well as from academic scholars who readily recognized that these remedial efforts rested on two essentially false premises.

One premise is that surface observations of what happened in school could yield proof that children of minority or lower-class background were lacking cognitive abilities they needed to profit from schooling. Linguists challenged this perspective, arguing that grammatical knowledge is cognitive knowledge that takes the form of internalized processing principles which govern individuals' ability to produce and understand grammatical sentences. Research in developmental psycholinguistics, moreover, provides overwhelming evidence to show that all normal children, no matter where and under what conditions they grow up, have full command of the grammatical system of their own language or dialect by the age of five. It has also been shown that grammatical knowledge is used automatically without conscious reflection; it is not readily subject to overt recall, and grammatical rules are not always directly apparent from surface speech. To study another person's grammatical system, therefore, requires indirect, in-depth methods of analysis. This research challenges the view that we can rely on naturalistic observation of speech behavior; we must guard against the tendency to evaluate others' speech in terms of our own grammatical presuppositions.

For example, we know from the history of linguistics that when new, in-depth methods were used to reanalyze some of the Native American languages that nineteenth-century investigators had dismissed as primitive, overly concrete, and lacking the means to express abstract thought, it was discovered that these languages had a grammatical system every bit as complex as any other. The new analyses proved that earlier scholars, who lacked basic analytical skills, had failed to perceive key phonological and morphological distinctions and had thus been unable to do justice to the languages they had described or to the cognitive abilities of their speakers.

The second false premise was that minority children's behavior in class was directly indicative of linguistic and cognitive ability both in and outside of the classroom. Although the earlier intervention approaches had been motivated by the intent to supplement a lack, they had the effect of entirely disregarding the child's contribution to the schooling process by ignoring what some children had learned during their first five years of creating meaning through language (Wells, 1986). The fact that some children, by virtue of their minority status, were seen not simply as different but as disadvantaged, meant that the school was not giving them the opportunity to build on the linguistic competence and on the language varieties that they had learned at home. Schools that do not understand the real nature of language differences are likely to underestimate the difficulties that children face in adapting to the classroom environment, so that in working to correct grammar alone they can do more harm than good. While in this approach the blame was not with the child, it did seem to attach to the family, the social community, and its language code, so that the family rather than school instruction itself could potentially be seen as the target for intervention (Bernstein, 1972).

At this point sociolinguists became directly involved in education, reasoning that although the so-called linguistically deprived minority-group children in urban schools spoke variant dialects of English and not distinct languages, there seemed no grounds to suppose that the early twentieth-century linguists' generalizations did not apply to them. A number of sociolinguists embarked on extensive field work to test this proposition through in-depth, ethnographically based studies of language usage in school as well as in home and peer-group settings. It was soon found that the educators' assumptions about minority students' supposed verbal impoverishment, on which many of the remedial programs were based, were simply unfounded. The very children who had appeared to be unresponsive in classwork and lacking in verbal ability were found to be extraordinarily skilled communicators in and out of school peer-group situations. The minority dialects they spoke were indeed significantly different from English, but the expressions that had been cited as evidence of "degenerate grammar" were shown to reflect underlying grammatical rules that were every bit as systematic and indicative of complex cognitive abilities as those of standard English. Moreover, they could be derived from earlier English dialects by generally accepted laws of linguistic change. The notion of linguistic deprivation, therefore, has no more validity than the nineteenth-century evolutionists' notions of linguistic and cultural primitivity, which earlier anthropological linguists had so effectively disproved.[1]

To summarize what we have said about language so far, there have been three different views of the role of language in education. In the earlier decades of this century, what we can call the instrumental, *school primer-based* notion of language as a written code prevailed, which emphasized correct written grammar, spelling, and punctuation. The assumption was that this correct usage could be taught and drilled in the classroom along with, and in somewhat the same way as, good handwriting (Cremin, 1990). Later on, when language came to be seen as an essential part of the learning experience, in the sense that literacy acquisition presupposes knowledge of grammar and pronunciation, attention came to focus on spoken language. But what was meant by spoken language was the standard variety of English, as if that were the only valid form, so that now it became part of the school's task to ensure that the child had proper pronunciation and grammar as a precondition for acquiring literacy skills. Since reading texts, curricula, and teachers focused on the importance of correct oral usage, we can call this second approach the *speech correction* model.

Finally, the sociolinguists' empirical studies of home and school usage made available a fuller knowledge of the facts of linguistic diversity. This brought about a third significant change in views of the role of language in education. It is not just Standard English that is important for learning. Modern educational systems are, in fact, faced with situations where speakers control different speech varieties reflecting "separate but equal" grammatical and cultural systems. In other words, while languages and varieties of the same language differ, they are ultimately equal in communicative value and rhetorical potential. We have, therefore, no reason to assume that otherwise normal American children whose grammar deviates from the accepted school language lack the cognitive prerequisites for learning. This relativistic view gradually influenced thinking and practice in the 1970s as the *linguistic and cultural enrichment* view.

Teaching as a Linguistic Process: The 1970s

One important argument established in the 1960s was that since differences in children's educational performance cannot be due to lack of linguistic/grammatical knowledge, problems of educability must lie not with the child's linguistic knowledge nor its cognitive contribution to understanding, but with the schools' practices of instruction. Neither is it the child nor the family that lacks understanding; the problem is the school's failure to incorporate different language and knowledge systems into its pattern of instruction. Because of their failure to acknowledge the facts of linguistic diversity, schools could be seen as lacking sensitivity to different ways of presenting information. Some interpreted the sociolinguists' findings about diversity as suggesting that speakers of linguistically distinct dialects are in a situation similar to that of second-language learners whose native grammatical system interferes with their ability to decode and process the school language. This implies that their learning problems cannot be solved by programs that simply seek to root out deviations from Standard English without recognizing that there is a deeper grammatical basis underlying the children's performance. It was argued that contrastive grammatical studies are needed to discover what the child's grammatical knowledge actually is before new teaching curricula can be instituted (Baratz & Shuy, 1969; Shuy, 1974).

Other researchers turned their attention to the school and began to explore the processes by which knowledge is transmitted in classroom instruction. A common hypothesis at the time was that linguistic diversity created the potential for misunderstandings that can occur through different language usage patterns. These misunderstandings, over time, can be seen as interfering with the learning process. This focus on the role of language in the learning process also changed the way literacy is viewed. From this perspective, the literacy learning that occurs in school can no longer be seen as the acquisition of a particular set of techniques specific to school tasks. Rather, school learning must be seen as part of the total language socialization experience by which children learn a set of complex cognitive and linguistic skills that begin with the earliest moves into language and speech. The schooling process is viewed as part of a wider set of linguistic experiences which begin and end outside of the school itself. The focus of research is on those linguistic processes that are particularly important in the classroom, and most specifically on the early years of schooling when linguistic and discourse patterns are first learned. The answer to the problem of culture difference was to see the school's role in the learning process as centrally located in the classroom, where changes in this process could be achieved in several ways: (a) through the teacher being seen as a broker for different cultural and linguistic messages; (b) through the classroom being viewed as a meeting place for different cultural groups and where some commonality of experience could be developed; (c) through the students being seen as bringing different patterns of discourse to the classroom from which all can learn, and from which the common and differing elements in literacy and language experience can be discussed.

The problem of literacy and learning from this point of view is reflected in the 1974 NIE guidelines for research on *Teaching as a Linguistic Process,* as quoted in Cazden (1988).

> The study of linguistic phenomena in school settings should seek to answer educational questions. We are interested in linguistic forms only insofar as through them we can gain insight into the social events of the classroom and thereby into the understandings which the students achieve. Our interest is in the social context of cognition; speech unites the cognitive and the social. The actual (as opposed to intended) curriculum consists in the meanings enacted or realized by a particular teacher and class. In order to learn, students must use what they already know so as to give meaning to what the teacher presents to them. Speech makes available to reflection the processes by which they relate new knowledge to old. But this possibility depends on the social relationships, the communication system, which the teacher sets up. (Cazden, 1988, p. 86)

There were two separable issues that surfaced in the 1970s.[2] Briefly, these were: (a) the relationship of differences in grammatical knowledge and language usage to their consequences on how the child is evaluated, and (b) that of the differences in classroom interactional knowledge as described primarily in the work of Erickson and his students (1979) and of McDermott (1974).

Sociolinguistics and Evaluation of Students

Apart from concentrating on research that seeks to clarify the linguistic nature of dialect and language differences and their effects on cognitive processing, sociolinguists also sought to explore the effect of these differences on the interpersonal relationships between teacher and students. For example, Labov (1972), one of the pioneers in the field, always drew a distinction between linguistic variables and the evaluative reactions they evoke. It is the latter point that was Labov's main concern in his germinal paper "The Logic of Nonstandard English." The argument was made with greater political emphasis in his later study (Labov, 1982), where he goes on to review a well-known court case in Ann Arbor, Michigan. In this case, African American parents successfully sued the school system for failing to meet the educational needs of their children. This argument showed that communication problems caused by dialect differences were interactional and do not reflect cognitive difficulties or questions of referential meaning. Reviewing the empirical evidence, Labov points out:

> The School District had failed to do a number of things that would have helped to solve the problem: to provide instructional alternatives based on the unique needs of the children; . . . to provide a reading program that would diagnose the problem . . . The full force of the complaint is best understood by considering what the School District had done for the children. It had:
> (a) placed or threatened to place five children in classes and programs for the mentally handicapped;
> (b) placed or threatened to place two of them in classes and programs for learning disabled children;
> (c) suspended or threatened to suspend two others from classes;
> (d) retained or threatened to retain in grade two others;
> (e) tracked three other children at lower levels of school instruction;
> (f) graduated two others to junior high school without preparing them to read, write and do basic arithmetic at the level required;
> (g) accepted labels and reports derogatory to two preschoolers.
> All this had been done, according to the plaintiffs, "without regard to plaintiffs' racial and linguistic background." (Labov, 1982, p. 172)

The Ann Arbor court case dramatically illustrates the cumulative effect that the individual normative judgments of students' linguistic abilities can have on their school careers. Implicit in the plaintiffs' argument are assumptions that low evaluations from as early as preschool classes, or unjustified placement in low-ability reading groups or remedial programs, constitutes a handicap that becomes increasingly difficult to overcome as the child moves through school. Although sociolinguistic analysis concentrates on the study of verbal forms, Labov's discussion suggests that what is important about these forms is not their function in conveying referential content, but the effect that a child's language usage patterns can have on treatment in school. It is evident from this that while learning is ultimately a matter of the child's individual ability, it is not that ability in absolute terms that is important, but how it is displayed within the interactional environment of the classroom and how it is evaluated and judged in relation to the school system's assumptions.

The following example from the work of Piestrup illustrates these issues and raises some additional problems.

> [T]he children were seated around a large table constructing sentences to show they understood words printed on cards. The teacher's attempt to elicit a grammatically acceptable rendering of "A boy *win* a race" resulted in a new example of how to use the word "win."
>
> Class: 'Win'
>
> T: Who can give me a sentence with 'win'?
>
> C1: A boy win a race.
>
> T: A boy *win* a race?
>
> C2: I know teacher.
>
> C3: I know teacher.
>
> T: Hmm, that sounds—
>
> C4: Teacher, I know one.
>
> T: —Can you say that a little better, so it sounds—I understand what you mean, but Erndalyn, what how would you say that?
>
> C5: The win' blew the hat off my frien' head.
>
> T: OK, that's what 'win' sounds like, huh. But this is the kind of 'win' when we, when you beat somebody else, when you win a race, OK? The other word, I'll show you how it's spelled. What word is this, Erndalyn? (Teacher writes 'win' and 'wind.') OK? And this is the kind of 'win' that we're talking about. This has a—
>
> C: 'D'.
>
> T: What's on the end?
>
> C6: A silent 'd'.
>
> T: A 'd'. It's hard to hear.
>
> C6, 7: It's a silent 'd'!
>
> T: Well, it's not really, really, silent, but it's just really hard to

> hear. It's there. Sometimes we say it so we can hear it. Can you hear the name of it? Did you hear the 'd' then? And we usually, sometimes we usually don't say it, but it's there, so Erndalyn, what does this, make a sentence with this kind of 'win'.
>
> C5: I, I, I mean, I, I can win th' race. I win the race.
>
> C7: I know.
>
> T: How about, 'I will win the race'? OK?
>
> C5: I *will* win the race.
>
> T: OK, pretty good. OK, this one.
>
> This example is of particular interest as the teacher had attended lectures on dialect differences and was following a recommendation to correct grammatical divergence and point out phonological alternants.
>
> A simple grammatical correction resulted in confusion. A child replaced "win" with "wind" when the teacher did not accept the first sentence.
>
> When asked the final consonant which distinguishes "wind," children chanted in an exaggerated, didactic tone, "It's a silent 'd'!" The newly invented designation seemed to fluster the teacher: "Sometimes we say it so we can hear it . . . And we usually, sometimes we usually don't say it, but it's there . . ." The child was also confused: "I, I, I mean, I, I can win th' race. I win the race."
>
> The last sentence is grammatically similar to the original one: "The boy win a race." This time the teacher suggests an alternate form, "I will win the race." But the reason may not be clear to the child. (Piestrup, 1973, p. 176)

In a second episode, the issue is the pronunciation of a final *R* (Piestrup, 1973, p. 187):

> Teachers in this group did not seem aware of dialect differences per se. . . . Episode 25 illustrates how a teacher failed to hear a correct response as if she expected to hear an incorrect or insufficient response.
>
> C1: 'Fire.'
>
> T: Sound.
>
> C1: 'Fa-rr.'
>
> T: 'Rr.'
>
> C1: 'Rr.'
>
> T: 'Rr.' So what is it? Fa—you don't play with it. It's what?
>
> C1: He-o-we-fa-er.
>
> T: Uh huh; now say it quickly. Fa—Uhhuh, say it. I can't hear you.

C1: 'Fire.'
T: 'Fa-aa.'
C1: 'Fire.'
T: 'Fire,' uh huh, say it quickly.
C1: 'Fire.'
T: 'Fire,' 'fire.'
C1: 'Fire.'
T: You don't play with fire, do you?
C1: He ha-ar-dee.
T: Dee.
C1: Da.
T: Ha—what?
C1: 'Hide.'
T: Put an 's' at the end.
C1: Hides.
T: Good. He what?
C1: 'He hides.'
T: Good, hi*des*, hi*des*.
C1: Hides.
T: Uh huh.

These are striking examples of teachers trying to integrate their knowledge of linguistic facts into their teaching approach and finding difficulties in relating the school's emphasis on phoneme segmentation to what they know to be the child's own system. They show that the instructional program of the school creates conflict both for the teacher and the student. This work illustrates that it is not really sufficient just to expose pejorative attitudes and perhaps teach teachers some linguistics to show that such classroom problems have no basis in linguistic fact. Furthermore, the mechanisms through which linguistic variation affects the classroom learning environment and questions of how pejorative stereotyping can be avoided are still far from clear. Instead, this work suggests that a communicative rather than a linguistic perspective per se is needed.

Classroom Learning as a Sociolinguistic Process

To appreciate some of what is involved from a communicative rather than from a purely linguistic perspective, we must consider the larger context and role of language in communication. Consideration of this issue suggests that the communicative problems in school contexts may not be due to linguistic problems but to the contextual usage and interpretation of communicative partners, such as the teacher. For example, the social situation of many African Americans differs in important respects from what is ordinarily associated with situations of linguistic and cultural distinctness. Along with other urban minorities, African Americans have long lived side by side in the same social environment with other English-speaking groups and have been in close contact with them. This contact has been at least as important as their linguistic history in shaping their language habits. On the one hand, the need for communication at work and in other public settings has brought about significant adaptations to the majority speech. Most adult speakers are, by now, bidialectal; that is, they control a range of styles and dialects and in their everyday speech they employ forms that are quite close to Standard English, as well as more traditional Black English forms. On the other hand, it is also true that when language use is associated with relationships of power and domination, intergroup contact can also act as a counterforce to prevent complete linguistic assimilation. Some preexisting distinctions are thus maintained, and may even be intentionally exaggerated as boundary markers or as symbols of the community's independence. This means that the fact that Black English speakers use Black English dialect features does not necessarily indicate that they do not know or understand the equivalent Standard English forms. Their language use may have other motivations as markers of in-group stylistic options. When used in a school context, Black dialect may be judged pejoratively by some. Yet the communicative problems that may arise are usually not only matters of referential meaning, as illustrated in the example from Piestrup.

The situation of other urban minority-language speakers from Latin America, Asia, or Africa has some similarities. Many of these groups continue to speak their own language at home and in their own community, yet the need for contact with the majority group in an urban environment has brought about widespread bilingualism. This, in turn, has led to significant reductions in the grammatical distance between the languages in question. Urban bilingual language usage, moreover, is marked by widespread code-switching, so that speakers can in fact shift from one language to another, often within one sentence. Such switching has important communicative functions and conveys meanings that in many ways are similar to those conveyed by stylistic choices in monolingual situations (Duran, 1981; Gumperz, 1982a).

The community studies suggest that it is not at all clear that the linguistic difficulties faced by bilingual children in schooling are due to a lack of grammatical knowledge of English; the problem is one of context-bound usage. If linguistic differences alone were at issue, we would expect children of Chinese and Japanese backgrounds to have the greatest difficulties, since these grammatical systems are most different from English. But this is not the case. Statistics on school performance show that recent Chinese immigrants from Asia generally do better than those born in the United States. This is true not only for the United States but also for immigrant workers in Europe, where learning difficulties are most severe for the second-generation children who are themselves bilingual and not second-language learners per se. In fact, research on language contact and diffusion has been responsible for revising the common preconception that the more two languages differ, the greater the learning difficulties: there is by no means a direct one-to-one relation between language distance and social distance. Often, the closer two languages or dialects are grammatically, the greater the import of social boundaries that separate them (Gumperz, 1972). It is, therefore, unlikely that grammatical differences as such can account for the learning gap (Gumperz, 1982b). What is needed is a better understanding of the way in which language enters into interaction to affect the learning environment of the school.

In the community studies, we have the beginnings of understanding the importance of language, from a perspective different from that of the earlier linguistic research. Language here is no longer a means of conveying referential information; dialect is problematic not because it can lead to a misunderstanding of what is said, but because language enters into the way social order is created and maintained through interaction. What it is about language that effects social ordering is not specified in these studies. What this work indicates is that discourse strategies project identity—that use could, and did, become a block to learning. This work also indicates that unless the classroom communication system could be constructively reorganized, learning would continue to be impeded. How this could be done, as a means of achieving a wider access to learning opportunities, built on initial insights from a more detailed look at the linguistic form, as well as the content and social placing of the message.

Some initial suggestions on how to break into the potentially negative cycle of compounding cultural error and sociolinguistic misunderstanding come from the anthropological tradition of detailed ethnography, which focused on the specific processes of classroom learning and instruction called microethnography (Erickson, 1979). Detailed studies of classroom practices highlighted (a) the subtleties of organizational regularities in classrooms created by teachers and understood and responded to by students, (b) the social order of a classroom, and (c) the patterns of participation structures between students as peers and with the whole class orchestrated by the teacher. This work showed how these aspects of the communication system provided for or denied access to learning in situations when the actual verbalized message was only one part of the total system (Erickson, 1979; Florio, 1978; Philips, 1972). Work that continued in this vein showed that the differences in instructional practices and misunderstandings between teacher and ethnically different students were mostly the product of interactional constraints, not conscious prejudice. Misunderstanding both linguistic messages and implicit cues provided reinforcement for differential instruction and learning, unless these culturally coded messages could be understood (McDermott, 1974). These studies alerted us to the communicative character of the social system of the classroom and, most important, to the fact that access to learning opportunities is determined socio-communicatively and is not initially a matter of cognitive understanding of language differences.

This research called attention to the fact that learning is not a matter of simple information flow in which teachers' words are simply picked up by the students; rather, learning is an interactive process that depends on both the ability of teachers and students to create conversational involvement. In other words, both teachers and students must work to elicit each other's attention, and the ability to do this is constrained by the classroom socioecology. Although the interactional studies did not deny the importance of language in the interactional process, their main focus was on social action, not on language per se. Language usage in situations of bilingualism and bidialectalism particularly showed how sociolinguistic research made possible a paradigmatic shift toward a focus on the interactive role of language, which provided new ways of relating issues of language choice to the problem of differential learning. The focus of such studies was both on the classroom and on the influence of classroom communication on the individual students and their motivation to learn.

Mitchell-Kernan (1974), in an early ethnographic study of the consequences of bidialectalism, argued that when we look at the problem of African American dialects from the dialect speakers' perspective, we find that dialects have an important rhetorical effect, inasmuch as they serve to symbolize and reinforce social identity. In her analysis of teaching styles, Piestrup (1973) suggests processes through which teachers can control their own and the students' use of two languages or two dialects to contribute to the individual's development of positive social identity over time. These processes also show students how to structure knowledge and recode information. While suggesting that the control of two codes is a stylistic issue, not a cognitive one, Gumperz (1971) shows that code-switching in a bilingual situation is rule-governed at the level of discourse (see also Gumperz & Hernández-Chavez, 1972). These studies suggest the complex nature of literacy learning tasks, both in and out of school, for many bilingual and bidialectal children. In many ways these studies foreshadow, at the level of sociolinguistic analysis, some of the ethnographic arguments that have recently been made for the development of school countercultures and cultures of resistance (see Mehan [1989] for a summary of the British work; also Macleod [1987], and Ogbu [1988]).

Schooling as a Sociolinguistic Process: The 1980s

What were the expected outcomes of this research? These studies have suggested that it is important to look at discourse rather than at grammar if we want to better understand the role of language in learning. How do the verbal strategies and styles such as those studied in the earlier examples relate to the interactional patterns of "participant structures"?

Another factor which has to be considered in the schooling/literacy equation is that the nature of the school discourse varies significantly from that experienced outside of school, not as reflecting different (middle-class cultural values) or as focusing on certain instructional routines, but essentially by constituting in its structure the task of schooling. School discourse is evaluative, as a study by Mehan (1979) has shown. Since the business of schooling is to learn, integral to all discourse messages is an evaluative component. For this reason, teacher talk appears to avoid the ambiguities and implicit meanings that everyday talk and discourse outside of the classroom relies upon. Mehan's isolation of the initiation-response-evaluation sequence characteristic of teacher talk has far-reaching implications for understanding not only sequences of classroom talk, but also the nature of schooling as a sociolinguistic process. This is a good example of the way that sociolinguistic research has shown that what is to be learned is often secondary to the way information is presented, leading to a hope that changing teaching styles would also make more available the content of school knowledge, whether in language or mathematical literacy.

Recent research on discourse has explored the way that teacher and students together interactively create learning environments which then shape or constrain further learning opportunities. An example of the constraints that can occur as a result of interaction between student and teacher is shown in studies that look at teachers' conduct of sharing time in first-grade classrooms (Michaels, 1983) or in reading lessons (Green, 1978, 1983). Such research as this has pinpointed the way in which students from different linguistic and social backgrounds bring a different set of discourse expectations into the earliest literacy tasks and showed how oral preparation for literacy is constrained by both the unconscious and unexplicated requirements of the literacy learning task in school. Neither teacher nor student are fully aware of the culturally specific character of the narrative expectations that the child brings to school, and how violation or alteration of these discourse norms can be felt as both threatening and puzzling. Duran (1981), following a similar line of inquiry, looked at the ways cultural differences influence the responses of bilingual children to narrative tasks. He explored what these differences can mean for the cognitive processing of discourse and the task of literacy learning. The deepening of our understanding of discourse processes, at both the linguistic and the social level, has given us more insight into some of the earlier issues of identity and instructional process and the interaction of these two in classroom learning.

More recent research on classroom discourse, described in *The Social Construction of Literacy*, has looked again at the problem of differential learning and its relation to the acquisition of literacy (Cook-Gumperz, 1986). In one of his studies of the sociolinguistic implications of reading instruction, Collins (1986) shows the discourse nature of the literacy learning task provided by teachers for children. In different teaching groups, lower-group students are presented with a word-by-word pattern of recognition strategies that provides for segmented discourse, while higher-group students are encouraged to make a discourse-level coherent pattern of strings of sentences. The strategies used with the higher group are appropriate for tests of reading competence, whereas the lower-ability groups stress word and sound recognition, often to the detriment of discourse-level comprehension tasks. Such differential instruction strategies, therefore, serve to reinforce ability grouping.

In studying the construction of literacy as a social and communicative process, we noted that when the findings on the discourse character of learning opportunities were combined with recent sociological research on the organizational implications of grouping in classrooms (Eder, 1986; Collins, 1986), the processes through which literacy is socially constructed were more clearly revealed. We can see that learning in classrooms requires several systems or levels of meaning to interact with the organizational constraints of classroom learning environments, instructional strategies, communicatively based evaluations, and the bureaucratic requirements of schooling (for example, statewide reading tests). This research shows that, over time, a reproduction of grouping relations tends to take place from grade to grade, as patterns of instruction are functionally related to teacher-evaluated group competence and to student performances that are contextually sensitive. Mehan, Hertwick, and Meihlis (1986) studied school decision-making processes of student referral. Their research established that there are complex interactions between communicative interaction in the classroom, a teacher's evaluation of a student's behavior, and the long-term processes of assembling a school record of demonstrable abilities. Together, these factors serve to constitute a student's school career. In the aggregate, these careers provide for the socially constructed reality of schooling and its outcomes, which give the substance to such phenomena as literacy rates and school-leaving test scores.

In generating such records, the decision-making processes are not subject to a simple linear process of what Mehan, Hertwick, and Meihlis (1986) refer to as centralized, rational decision making plans, but are informed by a variety of localized, face-to-face interactional decisions influenced by all the subtlety of verbal and nonverbal cues which have been uncovered in the studies of classroom discourse. A major assumption of these studies is that better teaching practices may result from a detailed understanding of the ways by which teachers provide all manner of intentional linguistic-content information and implicit paralinguistic cues to learning. By focusing on how the interactional system is sociolinguistically created, we can provide new theoretical links between the learner, what is to be learned, and the process of learning. Less student-teacher misunderstanding of each other's discourse patterns and sociolinguistic codes would provide for a more direct transmission of knowledge as the content of what is to be learned. It is in direct response to these assumptions that the program of research in interactional sociolinguistics is addressed.

An Interactional Perspective

As we have pointed out, studies in classroom interaction have highlighted the essentially interactive and cooperative nature of teaching and learning. For example, we have argued that in ethnically mixed classrooms, students and teachers utilize the inherent linguistic diversity of the classroom population to create environments where speech differences can be used to achieve rhetorical effects, effects that improve the effectiveness of classroom learning.

Building on these earlier insights, one of the main uses of sociolinguistics from an interactional perspective is to show in some detail how this rhetorical effectiveness is achieved. This approach to language differs from others in that it takes a communicative rather than a purely language-centered perspective. Language is seen not as an abstract grammatical and semantic system; rather, the focus is on the process of verbal communication in which culturally based background knowledge, along with information about context, enters into an inferential process through the symbolic mediation of language to produce situated interpretations. Therefore, such an approach does not start with the assumption of linguistic form as a separable phenomenon, but with communication as an essentially dialogic process, and meaning as situationally specific.

Along with many other students of discourse, we assume that understanding in everyday encounters is, in large part, a matter of inferences that rely both on linguistic presuppositions and knowledge of the world, much of which is culture-bound and contextually specific. We also assume that the processes by which we assess the validity and persuasiveness of an argument and judge the attitudes of our interlocutors are themselves culturally specific, as they presuppose sharing of cultural presuppositions. Although what is analyzed is the interpretation of lexical and nonlexical signs, the analytical points of departure are not particular linguistic forms or expressions but speech activities, treated as units of social interaction and occurring within the context of specific events. Our concern, then, is not with grammatically or semantically defined utterances per se, or even with speech acts, but with the context-bound processes of interpretation and speaking (Gumperz, 1982a).

Our approach to schooling processes focuses on the interplay of linguistic, contextual, and social presuppositions which interact to create the conditions for classroom learning. These presuppositions, we assume, apply to interpretations made within the context of definable speech events which stand out against the background of everyday interaction. They have characteristics that can be understood and described by ethnographers and recognized by participants. Moreover, knowledge of the events and what is accomplished by them is common to groups of people; they are not occasional occurrences but have a place in the daily conduct of affairs of groups.

Ethnographers of communication have shown that speech events constitute miniature social systems that can be described in terms of associated beliefs and values, the social relationships that are enacted, norms specifying who can participate and in what capacity, and expectations about suitable topics and themes and about appropriate speech styles. Furthermore, events often terminate in outcomes that provide empirical evidence for what it was that participants intended at any prior point in the event.

Language in the classroom can be seen as part of the language of the school setting; characteristics of particular classroom situations of children of different ages are seen to occur regularly as speech routines held together through the daily practices of teachers and students; that is, some features of these routines are similar across all classroom contexts and some vary as schooling progresses. Classroom ethnography studies in different age grades, covering interaction in and out of school, show regularity in speech-event occurrences and in the norms that govern these isolable events (Gilmore & Glatthorn, 1982).

Theory of Communication as Interpersonal Inferencing

Our interest in speech events, however, is not in their structural characteristics as such. That is, we are not primarily interested in exploring participant structures or norms of participation that exist in different cultural groups and govern the type and quantity of interaction that makes up the event. Rather, what we want to show is how participants' expectations of these structures, that is, their assumptions of what an event is about and what the relevant norms are that enter into the interpretation of particular messages. We therefore draw on yet another academic tradition, the recent work in linguistic pragmatics and speech-act theory (Austin, 1962; Cole & Morgan, 1974; Levinson, 1983). This work provides some basic insights into the perspective on language on which a relevant theory of interpretation must be based.

Departing from earlier traditions of semantic analysis that tended to concentrate on the relation of words to objects and concepts in the extralinguistic world, linguistic pragmatists argue that meaning must be studied at the level of discourse, in terms of the communicative effect that a sender tends to produce by means of a message (Grice, 1989). Thus, the illocutionary force of what is said, rather than the propositional content, becomes the main object of analysis. It has been shown that conversationalists frequently rely on context-dependent presuppositions, as well as on other types of extralinguistic knowledge, to arrive at interpretations that often have little relation to propositional content. If, for example, the teacher in class is heard to say, "I don't see any hands," when a question has been asked, her utterance will be interpreted as a request for a show of hands and perhaps as a directive to be silent, rather than as a simple descriptive statement. In interpreting what is intended, children, apart from processing what they hear, build on knowledge of what classroom environments require and on the goal of instruction.

The indirect inferencing illustrated here is an inescapable feature of everyday communication; it is not exceptional. Successful instruction depends on it to a degree that is not ordinarily realized. Although it is the overt aim of school talk and part of our implicit notion of pedagogy that all relevant information must be explicitly lexicalized or put into words, it is also true that such explicitness can never be achieved in practice. What teachers and grammarians may see as simple, clear utterances (for example, instructions such as "Draw a line on the bottom of the page") can only be put into action with reference to a complex set of unverbalized understandings that must be negotiated in the course of classroom interaction.

Thus, the interactional approach to sociolinguistics rests upon a notion of interpretation that enables us to deal with linguistic and social aspects of language usage within a single, unified theoretical and analytical framework. This points the way toward a more integrated approach to language, social relations, and social structuring from which a more detailed theory of how social relations enter into communication can be developed.

An ethnography of communicative situations describes the speech economy of any group or setting (Hymes, 1974), such as a school classroom or a series of classrooms within a school, by examining the patterns of events over time and space (i.e., in different settings, different schools or classrooms). From an interactional perspective, however, events as such, while a critical part of the structuring of social life, do not constitute what is most important about the whole communicative experience of participants in a classroom setting. It can be shown that participants' knowledge or expectation of such events plays an important part in our interpretation of what transpires. We can assume that these expectations become part of the schemata or interpretive frames that channel our understanding. The degree to which schemata are known, how schematic information is signaled and learned, and to what extent learning is a matter of sociocultural background, is crucial to our understanding of the communicative dimensions of instructional processes. Schematic knowledge thus provides the overall perspective that enables us to integrate bits of information into a coherent argument. When schematic knowledge is not shared, as is often the case in linguistically and culturally diverse settings, what seems like the same message in terms of overt propositional content may be interpreted differently by different individuals. This is how pejorative attitudes and stereotypes arise and are perpetuated in communication.

What does schematic knowledge consist of and how is it conveyed? Discourse analysts in the past have tended to treat schemata as matters of extralinguistic knowledge; that is, knowledge that speakers learn to utilize in the normal course of the language acquisition process and that all competent speakers can be said to possess. But if we take an interactional perspective on understanding as a phenomenon negotiated through conversational processes, serious questions arise as to the extent to which such knowledge is shared. Conversation of all kinds presupposes active cooperation between producers of information and listeners who provide feedback, either by means of direct responses or through alternate forms of back-channel signaling. Such cooperation cannot be taken for granted. To enlist conversational cooperation, potential speakers must induce others to cooperate; they must somehow convey at least some advance information on what the outcome of the extended exchange may be. Once talk has begun, moreover, initial schemata are subject to frequent change, and such schema changes have to be negotiated in the course of the interaction. Further problems arise with the allocation of turns at speaking. Individuals do not automatically control the conversational space to present or develop an argument. They must work to retain their turn by signaling what they intend, thus enabling others to predict where their own responses might fit in.

In this way, we can see that interpretation of all kinds—in informal talk as well as in classroom instruction situations, normally seen as task-oriented activities focusing on objective, that is, fact-oriented, information transfer—depends on participants' use of signaling or, as we call them, contextualization strategies (Gumperz, 1982a; Cook-Gumperz, 1986) to establish contexts favorable to communicative effectiveness. Work on interaction in the classroom, while taking off from ethnographic observations aimed toward the isolation of key speech events in classrooms, ultimately concentrates on such interactional questions. Among other things, research focuses on the conversational processes by which definable events are established as special sequences within the stream of activities that makes up classroom talk. For classroom members, the daily movement through time, event to event, is part of the essential communicative knowledge of when an event is happening, how shifts in activity take place, how such a shift becomes a new context that tells what to expect next and how to interpret what is said. We assume that interaction in classroom settings, like verbal interaction everywhere, is guided by a process of conversational inference which relies on participants' production and perception of verbal and nonverbal cues that contextualize the stream of daily talk activity. By means of such contextualization cues, participants recognize speech activities as part of wider sequences of talk through which contexts are identifiable. In this way, schemata are created and employed by participants to frame each other's situated interpretations. Contextualization cues together form a system that creates a nexus of significations by which interaction progresses and conversational moves constitute specific events. Although these transitory and transitional conversational phenomena have situated and localized interpretations, they also provide a continuing thematic thread through which participants across time build up specific inferential chains of understandings.

Thus, our task as interactional sociolinguists in modern educational settings is to chart the process by which theories of educability are put into daily practice, and to uncover the implicit theory of learning that underlies classroom strategies and that informs the teachers' practices and the schools' policies.

Conclusion: Interactional Sociolinguistics and Literacy Research

Our review of recent research suggests that changes which result from the studies of classroom language and teaching as a sociolinguistic process may be somewhat more complex than was first expected twenty-five years ago. The key hope then was that improved understanding of the language of interactional exchanges between teacher and student, and student and student, could guide an improvement of practice at the interactional, at the curriculum, and at the policy level. It was expected that by creating new instructional environments, one would eradicate the problems of differential learning. While some important effects can be demonstrated, particularly where researchers have worked with and influenced teachers and their classroom practices even if only for a short period (for example, Heath, 1983), the influence of research ideas on outcomes has not been so easy to see at the level of students' after-school careers. Thus, disappointments with sociolinguistic explanations have been voiced (see Mehan, 1989). One reason may be that we considered the chain of cause and effect to be more simplistic than is actually the case. Many of the critical questions that have been asked look for immediate changes in classroom practices as the key, rather than looking beyond, in a different time frame, at questions of changing pedagogies or theories of learning which can have a long-term effect on practices. The study of social interaction through language provides a perspective on learning that is sensitive to the complexities of interactive decision making, where changes in any part of a multiple interactional system can lead to any of several consequences, each one of which forms a different social context for further actions.

The following kinds of questions suggest the need to look at wider implications of classroom language use. Can increased understanding of the communicative contexts that shape classroom literacy practices influence outcomes not only in the early grades, but also initiate changes that can be maintained in later grades? Can improvement in understanding the processes of communication be seen to influence issues of remedial literacy and to reverse differential learning of different social groups in the school, thereby breaking the cycle of class and reproduction of educability (Macleod, 1987)? If sociolinguistic research is to be seen as influencing the outcomes of schooling, that is, the ability to get a job or be admitted to college, these are some of the questions that need to be asked. To return to our theme at the beginning of this paper, why does an interactional sociolinguistic approach have a special usefulness for literacy research? To answer this general question we will propose some issues that essentially involve the use of microsociolinguistic analysis.

Future Research Issues

First, microsociolinguistic analysis provides a detailed view of what is required to learn literacy. The sociolinguistic study of literacy shows the many ways in which judgments about language and about speakers, hearers, and readers enter into daily life. Much of the current educational policy writings about literacy present arguments as if literacy were the sum total of the test scores and other activities that concern educational policy-makers and make up pedagogical systems. That literacy is grounded in actions and reactions to the daily use of language seems sometimes forgotten. Sociolinguistics reminds us that literacy is language in use as discourse practices that are associated with textual creation and interpretation.

Second, not only are we suggesting that microanalysis is necessary to find out the differences of language used in actual situations, we are also suggesting that there is an interweaving of spoken and written understanding of text which forms a basis for any appreciation of literacy practices in daily life. Speech practices, storytelling, and other ceremonial performances of talk provide rhetorical rules and stylistic options that are part of the sociolinguistic uses of language that influence written texts (Tannen, 1989).

Third, an associated point is that judgments about literacy performance rest not on grammar nor on stylistic judgments alone but on the perception of language use as a form of social action. Differences of stylistic and other communicative choices are guided by a social understanding of the discourse in context. Discursive practices can be seen to shape interaction and to constrain the presentation of self. From this interactional perspective we can see that judgments made about literate performances of others are contextualized discourse decisions justified, or rather rationalized, after the fact as matters of language capability. As we have suggested, these decisions are a matter of cues and presuppositions based on knowledge of discursive practices of one's own language applied to other interpretive situations. If matters of gatekeeping judgments can be reexamined in light of these sociolinguistic views, then decisions about literacy learning and performance can be reevaluated.

Fourth, and perhaps most important, we return to the issue raised at the beginning of this chapter, involving the whole question of uses of other languages and dialects. As Resnick (1990) pointed out in a recent article on the history of literacy and schooling, "a language is a dialect that has an army, a navy and an air force—from a linguistic point of view." However, as Resnick goes on to say from his own perspective as a historian, "dialects encourage diversity and community but they can undermine political unity" (1990, p. 24). Throughout the history of American schooling, English has counted as the language of the nation and therefore of schooling. Schooling has been relied upon to make a "people" of diverse immigrant groups. School literacy was reading and writing in English; apart from brief periods in the 1880s and 1890s, no interest has been shown in dialects or alternative languages.

The ideology of school literacy is one of the rise of standard English not only as a historical legacy, but as part of the continuing assumptions on which many judgments of literate performance are made. But as recent writings in bilingualism have suggested, there is a need at the end of the twentieth century to rethink these traditional views on the "language of schooling" (Hakuta, 1986; Grosjean, 1983; Porter, 1990).

Sociolinguistic research provides a perspective that makes possible the exploration of the relationship of different discursive practices of other languages and dialects. From this perspective, researchers continue to question not only how literacy is acquired but also how literate forms are judged in terms of social and linguistic presuppositions that are informed by stylistic choices and options in other dialects and languages, not only in Standard English.

Notes

1. The effect of early sociolinguistic research, as described in what are by now generally known, basic volumes such as *Language and Social Context* (Giglioli, 1972, reprinted in 1980), *Directions in Sociolinguistics* (Gumperz & Hymes, 1972), and *Functions of Language* (Cazden, John, & Hymes, 1972), was to offer a consistent body of research findings that provided both a different perspective on language and a new agenda for educational research and that, among other things, also made significant contributions to theory.

2. There was research interest in classroom processes before the paradigm shift to the study of language as linguistic influences and interactional patterns. Methodologically, the earlier approaches focused on a rating and scaling of the content of different categories of teacher-student response and exchange. Theoretically this approach, recently called the product-process model of classroom interaction (Flanders [1970] as reviewed in Cazden, 1988), focused on the informational content and the style of the verbal message given by the teacher, its reception by the student, and the effect this has on measures of the interactional patterns in the classroom, such as density and frequency of interaction between students and the teacher. The contribution of the linguistic form of the verbal message toward understanding and the linguistic nature of students' responses were not considered. But this approach did serve to document the importance of studying the interactional patterns in classrooms and their contribution toward creating a learning environment.

References

Austin, J. L. (1962). *How to do things with words*. Oxford, England: Clarendon Press.

Baratz, J., & Shuy, R. W. (Eds.). (1969). *Teaching black children to read*. Washington, DC: Center for Applied Linguistics.

Bernstein, B. (1972). A sociolinguistic approach to education with some reference to educability. In J. J. Gumperz & D. Hymes (Eds.), *Directions in sociolinguistics* (pp. 465–497). New York: Holt, Rinehart and Winston.

Cazden, C. (1988). *Classroom discourse: The language of teaching and learning*. Portsmouth, NH: Heinemann.

Cazden, C., John, V., & Hymes, D. (Eds.). (1972). *Functions of language in the classroom*. New York: Teachers College Press.

Cole, P., & Morgan, J. P. (Eds.). (1974). *Syntax and semantics: Vol. 3. Speech acts.* New York: Academic Press.

Collins, J. (1986). Differential instruction in reading groups. In J. Cook-Gumperz (Ed.), *The social construction of literacy* (pp. 117–137). Cambridge, England: Cambridge University Press.

Cook-Gumperz, J. (Ed.). (1986). *The social construction of literacy.* Cambridge, England: Cambridge University Press.

Cremin, L. A. (1990). *Popular education and its discontents.* New York: Harper & Row.

DeLone, R. H. (1979). *Small futures: Children, inequality, and the limits of liberal reform.* New York: Harcourt Brace Jovanovich.

Duran, R. P. (Ed.). (1981). *Latino language and communicative behavior.* Norwood, NJ: Ablex.

Eder, D. (1986). Organizational constraints on reading group mobility. In J. Cook-Gumperz (Ed.), *The social construction of literacy* (pp. 138–155). Cambridge, England: Cambridge University Press.

Erickson, F. (1979). Talking down: Some cultural sources of miscommunication in interracial interviews. In A. Wolfgang (Ed.), *Nonverbal behavior: Applications and cultural implications* (pp. 115–129). New York: Academic Press.

Florio, S. E. (1978). Learning how to go to school: An ethnography of interaction in a kindergarten/first grade classroom (Doctoral dissertation, Harvard University, 1978). *Dissertation Abstracts International, 39,* 3239A–3240A.

Giglioli, P. P. (1972). *Language and social context: Selected readings.* Harmondsworth, England: Penguin.

Gilmore, P., & Glatthorn, A. (Eds.). (1982). *Children in and out of school: Ethnography and education.* Washington, DC: Center for Applied Linguistics.

Gould, S. J. (1981). *The mismeasure of man.* New York: Norton.

Graham, P. A. (1980). Whither equality of educational opportunity? *Daedalus, 109* (3), 115–132.

Green, J. L. (1978). Pedagogical style differences as related to comprehension performance: Grades one through three (Doctoral dissertation, University of California, Berkeley, 1977). *Dissertation Abstracts International, 39,* 833A–834A.

Green, J. L. (1983). Research on teaching as a linguistic process: A state of the art. *Review of Research in Education, 10,* 151–252.

Grice, H. P. (1989). *Studies in the way of words.* Cambridge, MA: Harvard University Press.

Grosjean, J. (1983). *My life with two languages.* Cambridge, MA: MIT Press.

Gumperz, J. J. (1971). *Language in social groups.* Stanford, CA: Stanford University Press.

Gumperz, J. J. (1972). Verbal strategies in multilingual communication. *Georgetown University Round Table on Languages and Linguistics, 23,* 62–75.

Gumperz, J. J. (1982a). *Discourse strategies.* Cambridge, England: Cambridge University Press.

Gumperz, J. J. (Ed.). (1982b). *Language and social identity.* Cambridge, England: Cambridge University Press.

Gumperz, J. J., & Hernández-Chavez, E. (1972). Bilingualism, bidialectalism, and classroom interaction. In C. B. Cazden, V. P. John, & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 84–108). New York: Teachers College Press.

Gumperz, J. J., & Hymes, D. (Eds.). (1972). *Directions in sociolinguistics.* New York: Holt, Rinehart and Winston.

Hakuta, K. (1986). *Mirror of language: The debate on bilingualism.* New York: Basic Books.

Hansot, E., & Tyack, D. B. (1982). *Managers of virtue: Public school leadership in America, 1820–1980.* New York: Basic Books.

Heath, S. B. (1983). *Ways with words: Language, life, and work in communities and classrooms.* Cambridge, England: Cambridge University Press.

Hess, R. D., & Shipman, V. C. (1965). Early experience and the socialization of cognitive modes in children. *Child Development, 36,* 869–886.

Hymes, D. (1974). *Foundations in sociolinguistics.* Philadelphia: University of Pennsylvania Press.

Labov, W. (1972). The logic of nonstandard English. In *Language in the inner city: Studies in the Black English vernacular* (pp. 201–240). Philadelphia: University of Pennsylvania Press.

Labov, W. (1982). Objectivity and commitment in linguistic science: The case of the Black English trial in Ann Arbor. *Language and Society, 11,* 165–201.

Levinson, S. C. (1983). *Pragmatics.* Cambridge, England: Cambridge University Press.

Lewis, O. (1966). *La Vida: A Puerto Rican family in the culture of poverty—San Juan and New York.* New York: Random House.

Macleod, J. (1987). *Ain't no making it: Leveled aspirations in low-income neighborhoods.* Boulder, CO: Westview.

McDermott, R. P. (1974). Achieving school failure: An anthropological approach to illiteracy and social stratification. In G. Spindler (Ed.), *Education and cultural process: Toward an anthropology of education* (pp. 82–118). New York: Holt, Rinehart and Winston.

Mehan, H. (1979). *Learning lessons: Social organization in the classroom.* Cambridge, MA: Harvard University Press.

Mehan, H. (1989, August). *Understanding inequality in schools.* Paper presented at the meeting of the American Sociological Association, San Francisco.

Mehan, H., Hertwick, A., & Meihlis, J. L. (1986). *Handicapping the handicapped: Decision-making in students' educational careers.* Palo Alto, CA: Stanford University Press.

Michaels, S. A. (1983). 'Sharing time': Children's narrative styles and differential access to literacy (Doctoral dissertation, University of California, Berkeley, 1982). *Dissertation Abstracts International, 43,* 2581-A.

Mitchell-Kernan, C. (1974). *Language behavior in a black urban community* (Monograph No. 2). Berkeley: University of California, Language-Behavior Research Laboratory.

Nunberg, G. (1989). Linguists and the official language movement. *Language, 65,* 579–587.

Ogbu, J. U. (1988). *Community forces and minority educational strategies: A comparative study*. Paper prepared for the Grant Foundation.

Philips, S. U. (1972). Participant structures and communicative competence: Warm Springs children in community and classroom. In C. B. Cazden, V. P. John, & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 370–394). New York: Teachers College Press.

Piestrup, A. M. (1973). *Black dialect interference and accommodation of reading instruction in first grade* (Monograph No. 4). Berkeley: University of California, Language- Behavior Research Laboratory.

Porter, R. P. (1990). *Forked tongue: The politics of bilingual education*. New York: Basic Books.

Resnick, D. P. (1990). Historical perspectives on literacy and schooling. *Daedalus, 119* (2), 15–32.

Resnick, D., & Resnick, L. (1977). The nature of literacy: A historical explanation. *Harvard Educational Review, 47*, 370–385.

Shuy, R. W. (1974). *Problems of communication in a cross-cultural medical interview* (Working Papers in Sociolinguistics No. 19). Austin, TX: Southwest Educational Development Laboratory.

Tannen, D. (1989). *Talking voices: Repetition, dialogue and imagery in conversational discourse*. Cambridge, England: Cambridge University Press.

Wells, C. G. (1986). *The meaning-makers*. Portsmouth, NH: Heinemann.

11 Studying Language and Literacy through Events, Particularity, and Intertextuality

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Language is both the primary content and means of education. As content, whether in school or in other educational settings, what people learn is language. In elementary school they learn how to read, write, and do mathematics (itself a language—see Crandall, Dale, Rhodes, & Spanos, 1986; John-Steiner, 1989; Connolly & Vilardi, 1989). In later grades, students learn the specialized languages and vocabularies of science (Lemke, 1988, 1989; Connolly & Vilardi, 1989), history (Cohen, 1986), geography (Wignell, Martin, & Eggins, 1989), literature (Bakhtin, 1981), and even of test taking (Aronowitz, 1984; Fillmore, 1982), acquiring what Beach (this collection) defines as a "field/disciplinary" stance. In work settings, people learn the language of their profession or trade (Cicourel, 1981; Fisher & Todd, 1986; O'Barr, 1981; Odell & Goswami, 1985). In home and neighborhood settings, children learn the languages of their families, communities, peer groups, and cultural groups (Bauman, 1982; Heath, 1983; Schieffelin & Ochs, 1986; Scollon & Scollon, 1981; Taylor, 1983; Willett, in press; Zinsser, 1986; see also Gumperz, 1972, on speech communities).

As a means of education, people use both conversational and written language[1] to learn and to teach. In schools, teachers talk, lecture, ask questions, give tests, write on blackboards, lead discussions, fill out forms, maintain records; students talk, listen, complete worksheets, read textbooks and other books, write stories and essays, take notes, ask and answer questions, take tests. In other educational settings (e.g., workplace and community settings), oral and written language

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We gratefully acknowledge the help of critical and editorial comments from Richard Beach, Marilyn Gillespie, Judith Green, Jerome Harste, Jay Lemke, Masha Rudman, Judith Solsken, and doctoral students at the University of Massachusetts, School of Education, and at Hofstra University, School of Education. Whatever flaws remain are the sole responsibility of the authors. We also want to acknowledge the Office of Research and Development at the University of Massachusetts, School of Education, for support to complete this manuscript.

are also used as tools for teaching and learning, although there may be important differences from their use in school settings.

The study of language and education has been approached from many disciplinary perspectives in both the social sciences and the humanities, including linguistics, anthropology, sociology, psychology, and literature. One direction in the study of language and education has been to redefine linguistic inquiry by ignoring disciplinary boundaries and incorporating theoretical constructs from several fields (Dickson, 1981; Green & Harker, 1988; Gumperz & Hymes, 1972; Tannen, 1982). What seems common to these inter- and multidisciplinary linguistic perspectives and inquiries is a softening or outright rejection of the distinction Saussure (1959) made between *langue* and *parole* (e.g., Hymes, 1980), and a description of language that is derived both from theoretical insights and from the realities of how people actually use and make language (e.g., Becker, 1988; Green, 1983; Gumperz, 1986; Sacks, 1972; Schegloff, 1988).

Although inter- and multidisciplinary inquiry is not new, Geertz (1983) has suggested that "genre blurring" (p. 19) is new. He notes that it is not just that scholars are crossing and merging disciplinary boundaries, but that the research agenda and the nature of inquiry itself have changed. Rather than seeking universals there is an increasing emphasis on the particular: on what happens in a particular place, at a particular time, with a particular set of people, engaged in a particular activity and event. What becomes important about that particular place, time, people, activity and event, is what it means, what its significance is for the people involved and for others, and what its import is for other events.

Issues Facing Literacy Researchers

In moving toward a multidisciplinary perspective, literacy researchers face three theoretical issues that frame the research direction: event, particularity, and intertextuality.

The first issue is *event*. Educational research, dominated by educational psychology, has viewed the individual as the primary unit of analysis (McDermott & Hood, 1982).[2] In contrast, Smith (1987) argues that individuals need to be seen as part of a whole, and that it is the research framework that transforms a whole, with its structured relationships among people, into isolated units.[3] By emphasizing the event [illegible] the unit of analysis, people and their language are viewed as embedded in events, even though it is their actions and their use of language that construct the event.[4] By viewing the event as primary, people and language are defined as inherently social[5] and other-oriented (Weber, 1968); meaning is located in the event rather than in people's heads (Bakhtin, 1986; Vološinov, 1983; Geertz, 1973). Further, by emphasizing the event, inquiry (research) is forced into an interplay between theoretical foundations and the realities of the event itself (including the realities of interpretation).

The second issue is *particularity*. Educational research has often sought empirical and statistical insights about educational processes extant *across* classrooms, schools, educational settings, students, and teachers (see Gage, 1989). Most recently, attention is being paid to what makes a particular classroom different from another, what makes a particular event in a classroom different from another event in that classroom or any other classroom (e.g., Erickson, Cazden, Carrasco, & Maldonado-Guzman, 1983; Green, 1983).

The third theoretical issue is *intertextuality*, the relationship between two or more texts, either written or conversational. To be intertextual, the relationship between texts needs to be recognized and acknowledged by the people in the event and have social significance (Bloome, 1989b); that is, intertextuality is socially constructed. By exploring which texts are being juxtaposed, at what levels, for what purposes, and by exploring how that juxtaposition is occurring, insights can be gained into the cultural ideology of the event (Bloome, 1989a; Lemke, 1988). Further, an exploration of intertextuality assumes that events are historical; that is, that events are related to each other, and that there is a past, present, and future. And if events are historical, so, too, are the people in them.

Exploration of intertextuality also provides a different perspective or definition of education. If part of what people do in events is use intertextuality to create meaning, to construct a cultural ideology, to establish history, then education can be viewed as acquisition of the communicative competence to participate in the event and in subsequent events in an appropriate historical manner. This is an overly complex way of saying that participation in one event leads to participation in another, and that people, while they are the creators of events, are also caught up in them.

Underlying the discussion of event, particularity, and intertextuality are three additional dimensions that require a multidisciplinary perspective: *history*, *material*, and *dialectics*.

Events do not occur in isolation from each other. One way they are related is historically. What happens in one event—the meanings created, the social identities formed, the material goods given significance—influences other events. As James Heap argues in Chapter 3 (this collection), historical influence can be seen in the construction of an event as constraining or limiting the options, meanings, language, and material goods that are available to the participants. For example, in any particular classroom, teacher and students are constrained by the historical impetus that created the institution of their particular school with its concept of teacher and student roles, its specific views of knowledge and the acquisition of knowledge, and the particular historical/biographical experiences of the students and the teacher. On a smaller scale, within a classroom, any particular event is historically influenced by the events preceding it, on that same day or on previous days. While it is not the case that history is deterministic, and while historical relationships, constraints, and limits are both materially related and socially constructed,[6] it is the case that participants act and react within the context of the historical relationships they have constructed, and they must account for and react to those historical relationships.

In order to fully understand the particular, the dynamics of an event, and the construction of intertextuality, researchers need to analyze those historical forces that have channeled particular people to a particular place at a particular time to accomplish a particular set of tasks. Such analysis requires a multidisciplinary blend of methods drawn from history, sociolinguistics, and anthropology, among other disciplines.

By *material* we mean all those aspects of an event that can be experienced by the participants. This includes the physical setting (room, desks, chairs, etc.) where the event takes place, the artifacts (textbooks, handouts, pencils) manipulated by the participants during an event, the participants (i.e., adults and children) who construct the event, and the behavior of the participants (e.g., how they act and react to each other, the utterances they make). Language, also, has a material basis. As Vološinov (1983) argues:

> Every ideological sign is not only a reflection, a shadow, of reality, but is also itself a material segment of that very reality. Every phenomenon functioning as an ideological sign has some kind of material embodiment, whether in sound, physical mass, color, movements of the body, or the like. In this sense, the reality of the sign is fully objective and lends itself to a unitary, monistic, objective method of study. A sign is a phenomenon of the external world. Both the sign itself and all the effects it produces (all those actions, reactions, and new signs it elicits in the surrounding social milieu) occur in outer experience. (p. 11)

Of particular interest to us is the notion that language is fundamentally a *response*, a material response, not only to what has been said or done before but also to what will be said or done in the future. An utterance that no one appears to respond to plays no role in the construction of an event. In order to understand an event, it is necessary to comprehend both the meaning of the material behavior and "those actions, reactions, and new signs" that it elicits.

Dialectic is defined by the *Oxford English Dictionary* (1971) as "the art of critical examination into the truth of an opinion; the investigation of truth by discussion." *Webster's New Collegiate Dictionary* (1973) defines *dialectic* as "any systematic reasoning, exposition, or argument, that juxtaposes opposed or contradictory ideas and usually seeks to resolve their conflict." Our use of *dialectic* highlights both the tension between or among various arguments or ideas and the agency (discourse) involved in creating and resolving that tension. That is, in any event there is a series of contradictory forces,[7] and it is within the context of these contradictory forces— their definition, their creation, their resolution—that people act and react to each other.

In studying events, researchers may study how the participants define and resolve dialectical tensions. Negotiating a resolution of these dialectical tensions is an essential component of a particular event. For example, a school's respect for students' individuality and its need for group control is an inherent dialectical tension that must be resolved.

Event

In this section, we discuss events as interpersonally constructed, where meaning is situated in the particulars of an event, how events define people's social identity, and the relationship between events and the construction of cultural ideology.

Events as Interpersonally Constructed

By *event*, we are referring to the face-to-face interaction of people in a discourse sequence with a recognized beginning, middle, and end. Events, then, are constructed by the actions and reactions of people to each other. People's actions—the sounds they utter, the movements they make, their manipulations of their environment—are material. That material is given meaning and importance through interpretation by the people constructing the event. Gumperz (1986) has suggested that people in interaction with each other provide multiple and redundant contextualization cues (verbal, nonverbal, and prosodic cues) to signal their communicative intentions.

Event also refers to the interaction of people with their social environment. A student reading a book alone in a library carrel is interacting with a social environment in several ways. The carrel is a social tool, used to structure social relationships by separating people (the denial of face-to-face interaction being a social act). The book itself is a cultural item, cultural material. Through experiences with the book, the student may be interacting socially with its author (Bruce, 1981). Indeed, literary theorists have suggested that written text promotes various social relationships between the reader, the writer, and the text through the use of rhetorical devices (see Ong, 1977; Robinson, 1987).

Beyond the student-text interaction, the student's reading has a history. He or she is reading the book because of something that happened earlier (e.g., the teacher assigned a report) and because of a consequence for the future (e.g., completing the report). Thus, although the student is physically alone, the student is still participating with others in creating an event.

Understanding the meaning of the behavioral/empirical data of an event requires researchers to unpack how each reaction provides an interpretation of previous actions, itself, and future actions. As Bakhtin (1986) and Vološinov (1983) note, every utterance is both a reflection and refraction of history. The warrant, then, for researchers studying events is for an emic description that is both material and interpretive, one that captures the continuous evolution of the event as a dialectic between historical reflection and refraction.

Meaning as Situated in the Event

The meaning of any utterance, behavior, or material depends on the interactional context. The communicative intent (and realized effect) of an utterance can only be understood as a response to what has already occurred and what will/might occur" (Green & Wallat, 1981; Gumperz, 1986; Hymes, 1974; Bakhtin, 1986). For example, a teacher asks the question, "When was the Civil War?" That question is understood in reference to the students' and teacher's understanding of what they are doing at that time, what has gone on before, and what might happen. If they have been discussing the Civil War, the question may be understood in terms of a Civil War lesson; however, if they are discussing civil rights laws, then the question will be understood in terms of that topic. If students are being unruly, then the question may be understood as a directive to stop being unruly as well as a request for information about the Civil War. If they are engaged in a recitation-like lesson, since the question is a known-information question, students would need to interpret and respond with information valued in the classroom (e.g., repeating something in the textbook or something the teacher mentioned earlier) in a manner appropriate to lessons (e.g., not in slang or obscene language but in a more formal register perhaps a complete sentence) (Bloome & Nieto, 1989; Heap, 1988). It may be the case that the question is embedded in all of the contexts mentioned above, and more. At one and the same time the question can be a directive, a request for information, the signaling of a specialized conversational genre, and so on. What the question means depends on what is going on at that time, what has preceded it, and the negotiated future.

In arguing that meaning is situated, we may be misunderstood as locating meaning in a person's communicative intent. But meaning is not located in intent alone, even in situated intents. An individual can intend an utterance to mean or do something, but the ways in which others respond to that utterance may redefine it and *de facto* give the utterance meaning. Thus, the meaning or significance of any utterance is not located solely in a person's intent but rather in the event, in the concerted actions of people with each other.

But how do people know what is going on? And given that there may be multiple and different situations at any one time or that have preceded a moment or event, how do people know which one or set of situations or events contextualize an utterance?"

Situations are not given but are socially constructed (Erickson & Schultz, 1977). As people interact with each other they build a working consensus for what is occurring, for what is appropriate to communicate about, and how that communication should occur. In terms of Beach's "textual stance" (this collection), some events may be defined according to a familiar format, genre, or discourse type: lecture, discussion, recitation, telephone conversation, dinner talk, sales pitch, radio talk, etc. Yet, even in invoking a known type of situation, people must still work at establishing that situation, reconstructing it so that it meets the particular needs and agenda of the people there at that time. Invoking a known situation type or known language event also needs ratification from the other people in the event (Schegloff, 1988). For example, in a give-and-take conversation, when a person wants to tell a story and maintain the floor in doing so, the person must signal a transition to storytelling and get approval from others to do so (Sacks, 1972).

Not all events are known, familiar situation types, nor do all events need to be labeled. As people interact with each other, they establish a communicative and social agenda for the event and for ways of interacting with each other. What they establish may evolve and change; there may be a series of transitions, mutually signaled and approved (Gumperz, 1986).

Classroom realities influence the nature of classroom events and consequently influence how meaning is situated in classroom events. Some of the material realities that influence classroom events are: there is usually one adult (teacher) and many children (students), and the classroom is separate from other classrooms, and is usually separate from events outside of school (an exception would be on-the-job training). These classroom realities influence the nature of classroom communication and the construction of classroom events.

Consider the material realities of a question asked by a teacher, addressed to a particular student. The teacher and student are engaged in face-to-face interaction with all of its social and communicative complexities. The student must respond in a manner that is appropriate both in form and content. At the same time, the interaction between the student and the teacher takes place in a public event before the other students. Thus, any interaction between a teacher and a student during a classroom lesson is to be taken as communication with the whole class, unless otherwise indicated by the teacher. By asking a question of a particular student, the teacher is indicating to the whole class that they should know a particular domain of knowledge. How the teacher responds to the student's answer demonstrates to the whole class what forms of language and content are appropriate and for what they will be held accountable (Heap, 1988).

Teacher questions and teacher talk are always embedded in teacher-class interaction, not just in dyadic teacher-student interaction. For the student selected to answer the teacher's question, the social and communicative situation also involves multiple levels. Although the student must respond appropriately to the teacher, since the student's response is public, the response must also be appropriate to the student's interaction with his or her classmates. How the student responds to the teacher communicates to peers who the student is and his or her social relationships with peers (Everhart, 1983). Although they may not have been directly addressed, other students in the classroom do respond to how the target student answers the teacher's question. Variously, they may signal approval or disapproval through eye contact, other nonverbal behavior, or verbal signals. They may try to take the target student's turn away by shouting out the answer before the target student responds. They may communicate social standing in the class by bidding for turns at talk while the student is responding or immediately after the student has responded, whispering answers to the student, or in other ways covertly communicating with the target student.

While student talk, like teacher talk, is always embedded in teacher-class interaction, it is also always embedded in student-student interaction. What students need to do is carefully orchestrate their linguistic and social behavior so that they appropriately participate in all three levels of interaction: teacher-student, student-student, and teacher-class (Bloome & Theodorou, 1988). The meaning of any utterance, therefore, is located simultaneously in teacher-student, student-student, and teacher-class interaction, and in the relationships between these various levels of classroom interaction.

That classrooms are separate from real-world[10] events also influences how meaning is situated. Anthropologists such as Firth (1936), Goody and Watt (1968), and Mead (1970), among others, have noted the cultural importance of classroom education which inherently removes knowledge from the actual situations in which the knowledge was generated or might be used (except on rare occasions). As a result, classroom instruction serves to demonstrate knowledge rather than actually employ knowledge. Students are taught and are asked to display abstract knowledge—what is sometimes called decontextualized knowledge—that presumably can be applied in a broad range of situations outside of school, beyond those in which the knowledge was originally generated. Even when students' activities emulate real doing, such as when vocational high school students build a house or when students write stories or read literature, the real activity is more a means of more effectively teaching a body of knowledge than an activity done for its own sake or because it needs to be done. That is, the doing of real activity (in the context of classroom education) is merely a pedagogic technique for teaching abstract/decontextualized knowledge (except in rare cases). This classroom reality, that activity is for knowing rather than for doing, influences how meaning is located in events. The meaning of a teacher's question, a student's utterance, what students write, is contextualized by the separation of classroom life from the real world.[11] (Also see Resnick, 1987, on differences in learning in school and out.)

Teachers and students are required to create events that look like schooling. They both expect that the activities they do in classrooms will broadly emulate the cultural models they hold for what classroom events should look like. Bloome, Puro, and Theodorou (1989) have referred to this phenomenon as procedural display. They define procedural display as:

> In doing a lesson, teacher and students must construct an event that can be taken as a lesson. That is, the event they construct must be interpretable as a lesson by the local education community.
>
> In classrooms, teachers and students use language within the context of face-to-face interaction to construct lessons. They display to each other sets of interactional and academic procedures that count as doing a lesson. The interactional and academic procedures that count as doing a lesson are what we term *procedural display*. More formally stated, procedural display is (a) the display by teacher and students, to each other, of a set of academic and interactional procedures that themselves count as the accomplishment of a lesson, and (b) the enactment of lesson is not necessarily related to the acquisition of intended academic or nonacademic content or skills but is related to the set of cultural meanings and values held by the local education community for classroom education. (p. 272)

While classrooms may vary both in the degree and nature of procedural display, the meaning of teacher and student behavior is contextualized by procedural display.[12]

This brief discussion of the location of meaning in classroom events makes clear the complexity of interpretation both for participants and for the researcher. Meaning is located in events at various levels and is contextualized by a broad range of material and interpretive realities and dimensions. One theoretical and methodological implication is that there can be various meanings extant at the same time and in the same place. These various meanings are located in the event and are part of the interpretive context within which people act and react to each other. As both complementary or unrelated, contradictory and conflicting, these meanings constitute part of the dialectics of classroom events.

Events Define and Redefine People

In any event, people are continuously negotiating their identities and social relationships (Goffman, 1967). Their social relationships may involve speaking rights and obligations, authority for interpretation of written language, rights to tell or retell stories (Shuman, 1986), access to material resources, and even rights to listen (Shuman, 1986).

For example, in a classroom the teacher is identified as a teacher because of the rights, privileges, and obligations assumed by that person. A teacher is more than an adult among children. Similarly, students are more than children because they have a set of rights, obligations, and privileges in relation to the teacher, to each other, and to the material environment of the classroom and school. While most teachers share a set of rights, privileges, and obligations which socially define them as teachers, there are differences, and in each classroom their identity as teacher—as opposed to friend or aide or adult student—needs to be continuously defined and maintained. In part, teachers maintain their identity as teachers by taking the rights, privileges, and obligations assigned to them by mutual agreement among their students and themselves. But, in large part, students maintain the teacher's identity by ratifying the teacher's rights, privileges, and identities.

Both within and across classrooms, there may be differences in how children are defined as students. These include (1) differences among children, such that some children are defined as students in one way and others defined as a different kind of student, and (2) differences across various events: what is required to be identified as a student in one situation, like a reading group, is different than what is required to be identified as a student in another, such as a cafeteria. Yet how identities and social relationships are defined both within and across events is not random but is part of the construction of a cultural ideology.

Events and the Construction of Cultural Ideology

We define an ideology as a system of concepts. Ideologies are socially constructed. Both the concepts and the relationships among concepts are not inherent but are determined by people, interacting with each other. As such, any ideology is a cultural ideology (hereafter, we use *ideology* and *cultural ideology* interchangeably).

In much recent research, ideologies are viewed as cognitive phenomena, as schemata (Rumelhart, 1980), as cultural models (Holland & Quinn, 1987), as shared standards and expectations (Goodenough, 1970), as shared cognitive models (Frake, 1969). However, others have argued against locating ideologies in people's heads, instead locating ideologies in events (Geertz, 1973). We also argue for locating ideologies in events, although we, like others (e.g., Bakhtin & Medvedev, 1978; Vološinov, 1983), do not deny that there are intellectual factors that also influence events and ideologies.[11]

The ways in which people act and react to each other produce an interpretive framework both for understanding behavior and for connecting that event with other events. As people continue to interact, they create (or re-create) a material and semiotic history for the event. The interpretive framework of the event and its continued evolution, its historicalness, and its connections to other events constitute the ideology (or sets of ideologies) located in the event.

For example, consider a classroom discussion of a novel. Assume the teacher has previously asked the students to read the first chapter. As the teacher and students begin to discuss the book, they act and react appropriately to the ideology of classroom discussion (an ideology about the relationships of people, teachers and students, to each other) that has historical roots in their previous classroom discussions, both in that classroom and in other classrooms. Their interaction also begins embedded in an ideology about the relationship of people, especially teachers and students, to books, especially school books. These histories are materially given in the structure of the interactional materials available (e.g., how turn-taking is arranged, the arrangement and number of people present, the mandatory nature of students being present, that every person has the same book), and the histories are given in the structure of that event to other classroom events and all of those events to the interpretive and material agenda of the school (e.g., evaluating students and distributing access to various social, economic, and psychological resources and rewards). As teacher and students continue to interact, they maintain or reconstruct the ideology of the event. They hold each other accountable for acting within the interpretive framework of the event or for acting in ways that might extend or move beyond the interpretive framework. Teachers and students can discuss the novel's meanings as long as those meanings are coherent with the various ideologies extant in the classroom for how written text can mean, for what meanings are possible in the classroom, for what meanings can be generated by students or by teachers (as formulations of their social identities), for what meanings are consistent with the history of the event, and the event's connection to other events.

Particularism

Much current social science and educational research has been concerned with discovering universals: those rules, patterns, and generalizations that can be extracted from an event or set of events and shown to be operating in a wide array of situations.[14] We argue for a different agenda, an agenda concerned with the particular (see also Heap, this collection).[15] Such a research agenda would focus on what makes an event different from other events; that is, particular.

Toward a Definition of Particular

Consider a classroom reading lesson. The students are sitting around a table, orally reading two lines each, in round-robin fashion. If they make a mistake, the teacher corrects them, they repeat the correction and continue. When they have finished reading the story, the teacher will ask questions, call on students to answer, and praise them when they give the correct answer. So far, what occurs in this reading lesson is similar to what has occurred in nearly every reading-group lesson they have had this year. It also is what occurs in reading groups throughout their school and in many other schools and has occurred for many years. But on this particular day, Stephen has a cold and has wiped his nose on his sleeve. Margaret is angry with Sarah for stealing her crayons. Beth is very interested in the story because it is about a circus and she loves clowns. Beth and Sarah are identical twins. Someone has written and drawn pictures in the margins of Walter's book; they have also colored in the loops in all the letters on the first page of the story. The story was read by the other reading groups months ago, and they got to draw pictures about the circus first. The teacher is trying to get Patrick to participate more in class, but Patrick has had enough of school, reading groups, and the teacher. Benjamin is happy the teacher picked him to read first, because he never gets picked first to read. He thinks he doesn't get picked to read first because he's not a good reader. The teacher doesn't think Benjamin is a good reader, but she recently read an article that suggested letting students who are not good readers read first. Stephen, Margaret, Sarah, Patrick, and everybody else in the group is upset Benjamin got to read first, because they all think they're better readers than he is. The teacher is tired of doing the same old things with the basal stories and has planned to make this the last basal story this group reads this year. All of the nose wiping, crayon stealing, turn-taking, who's a good reader, marginalia, clown liking, last-time basal story reading is part of the language of that reading group's face-to-face dynamics on that day.

At one level what's going on in the reading group is similar to what goes on in most reading groups. But there is another level particular to that event on that day. It is not the same event as yesterday's reading-group lesson or tomorrow's or as occurs in another classroom.

Several things make it a particular event. First, the material conditions are different. While it is the same room as yesterday and is similar to most other classrooms, today Robin is absent, Stephen has a cold, it is the first Friday in December. Walter's book and those of other children have been altered. Second, there are specific relationships among the particular people in this event. Beth and Sarah are identical twins. Stephen forgot his handkerchief and is afraid to ask the teacher for permission to get tissues. Some of the students are upset with each other. Many are upset with the teacher and with Benjamin. Patrick is ready to drop out. Third, there are various histories converging on this particular event: the history of this reading group in comparison to other reading groups in the classroom, the historical practices of this reading group in assigning status and in defining what and who is a good reader, the history of the teacher teaching reading, the boredom that Patrick and the teacher seem to share, and the history of accountability for both students and teachers; it is also historical that this reading-group lesson will be their last basal story. Fourth, there are various intertextual relationships converging. The teacher has read some articles on teaching reading that are prompting a change, Beth has read lots of books and stories about clowns, unknown people have written comments and drawn pictures in the margins of many of the books, the story is similar in structure to previous basal stories, etc. Fifth, there are a series of tensions between maintaining the status hierarchy among the students versus a more equitable distribution of status and turns at reading, between the twins' identity as a pair versus their advocacy for themselves as individuals, between the students who want to read the story for its substance because it is about a circus and those who want to read it as a lesson, and between the standardizing of basal reader instruction and the independence of the new pedagogical practices the teacher wants to try. And sixth, there is the agency of the children and teacher in response to what is happening and what will happen. Patrick is dropping out, the teacher is making changes and restructuring, Stephen wipes his nose on his sleeve, all of the children and the teacher talk and respond to talk, and so on.

One of the ways in which the particularity of an event such as this one is expressed is through language. However, linguists and sociolinguists have tended to focus on the universal and broadly shared resources of language—on grammatical structures (Chomsky, 1965), on turn-taking protocols (Sacks, Schegloff, & Jefferson, 1974), on the responsibilities of interlocutors (Grice, 1975). Educational linguistics, including psycholinguistic, ethnolinguistic, and ethnomethodological studies, has also tended to focus on generalized language practices—on the structure of teacher-student interaction (Mehan, 1979), on participation structures (Philips, 1982), on reader-text interaction (Stubbs, 1986), on scaffolding (Snow, 1983). While understanding the general is important, it is also important to understand how the use of language at a specific place and time expresses the particular, the particular convergence of histories, material conditions, dialectics, and agency of the specific people there. Or, to put it in a less pedantic way, while it is important to understand the language of reading groups, it is also important to understand how language makes the reading-group lesson described above as something Sarah, Stephen, Patrick, Benjamin, Walter, Margaret, Beth, and their teacher do on the first Friday in December. It is important to understand their particular voices and how they emerge (or are silenced) in that particular event.

Bakhtin (1935, quoted in Todorov, 1984)[16] argues for a similar direction in the human sciences:

> The human sciences are the sciences of man in his specificity, and not the sciences of a *voiceless* thing and a natural phenomenon. Man, in his human specificity, is always expressing himself (speaking), that is always creating a text (though it may remain *in potentia*). (p. 17)

The texts that people create do build on general and shared attributes of language. Otherwise, there would be no way for people to communicate with each other. However, as Becker (1988) notes:

> [T]he variety of things we can do with language defeats cataloguing, except at the most general levels. And at those general levels, the particularities that we're concerned with here, the things that make you different from you and you different from you, these particularities wash out. . . . If we are interested in those differences, if we're interested in getting across those differences to talk with another person, then those things which wash out at higher levels of generality are just the things we need and just the things we can't afford to wash out. (p. 28)

Becker (1981) writes, "the most difficult task of the philologist is to hear the individual voice" (p. 5). While the quotation above is specifically concerned with explicating Emerson's essay, "Language," the point Becker makes also seems true for researchers studying the language of events. The most difficult task is to "hear" people's voices and the voices of the event.[17]

> For Ricoeur (1971: 529–562), discourse differs from language (i.e. Saussurian 'langue') in that discourse has a particular writer or speaker, a particular reader or hearer, a particular time, and a particular world. I [Becker] would add, any discourse also evokes a particular set of prior texts for the participants. A discourse can be understood only in its particularity.
>
> For the study of particular discourse, we need techniques of textual parsing which include all the kinds of discourse variables

> which constrain its particularity—which help shape it. Such techniques will have to allow us to move across levels of discourse and discern the different kinds of constraints operating at various levels: word, phrase, clause, sentence, paragraph, monologue, exchange. (Becker, 1981, p. 8)

Literacy researchers therefore need to frame their inquiry in terms of the particular. Geertz (1983, p. 154) argues that an understanding of the particular "is an attempt not to exalt diversity but to take it seriously as itself an object of analytic description and interpretive reflection." He goes on to suggest that such a perspective does *not* pose a threat to what researchers may discover of

> the constancies of perception, affect, learning, or information processing. What it forms a threat to is the prejudice that the pristine powers that we have in common are more revelatory of how we think than the versions and visions that, in this time or that place, we socially construct. (pp. 154–155)

Regardless of whether one starts with the general and works toward the particular or the other way around, it is only in their juxtaposition—their tension, the ways in which they synergize new meanings and actions—that both the general and particular can exist and have social and communicative significance.

Understanding the Particularity of Language

Understanding the particularity of language is important for at least four reasons. First, an inquiry into the particular provides a sense of diversity. Researchers interested in studying a type of event (for example, reading-group lessons) need to understand the diversity of such events beyond their similarities. Second, assuming that certain types of events have broad social, cultural, and educational consequences, only by understanding how the particular is obfuscated in such events can researchers understand the broader consequences.[18] How is it that events which, at one level, have meanings, relationships, and actions, particular to that event, all get homogenized as a type of event? Third, an inquiry into the particular provides a way to understand the differences between two events. Educational researchers have clearly shown that two teachers can teach the same lesson and that it can end up being two very different types of events with very different educational consequences (e.g., Wallat & Green, 1979). Examining the particularities of the events can provide one set of insights into what can make a difference. Fourth, inquiry into the particular provides the opportunity to evaluate the validity of universals. If the universals are valid, then it should be possible to see how they are realized in the particular. An understanding of the particularity of any event or set of events can provide insight into the role and import of universals.

Underlying this technocratic rationale for understanding the particular is a concern for the general and universal nature of language and its use. Inquiry into the particular is based on how it can help better explicate broad social, cultural, educational, and economic processes. Such insights can help people understand their relationship to the broader society. Of course, such insights can also help exert control over people.[19]

In contrast to this technocratic rationale is a concern for the particular, because it highlights and makes visible "everyday" people. A concern for the particular inherently takes seriously what people do in their everyday lives, refusing to homogenize the events of people's lives into a nameless and faceless set of general tendencies or rules. For example, consider the interviews of working people by Terkel (1972) or kindergarten children by Paley (1981), the sociological study of mothers by Smith (1987), the educational studies of Hispanic students by Sola and Bennett (1985), the ethnographic studies of rural communities and classrooms by Heath (1983), and of families by Taylor (1983; Taylor & Dorsey-Gaines, 1986), among others. Although different in their disciplinary perspective and genre of writing, in these studies people and events unlikely to be featured in history books, *People* magazine, or television shows are highlighted and their importance described. To do this is a political act, because so often in schools, in social policy, and in research, the voice and visibility of people and events go unacknowledged or worse, denied. The voice and visibility of the people being studied, their historicalness, the material conditions in which they live, the contradictions to which they have to accommodate and respond, their agency (how they act on and in the historical circumstances in which they find themselves), are highlighted.[20]

An emphasis on the particular and on people's everyday lives does not preclude an acknowledgment of broad sociological processes (Delamont, 1983). Rather, it is within everyday events that broad sociological processes are revealed and defined. It is not so much that in the event there is a microcosm of the world, but rather that any event, and its particularity, does not happen in isolation from other events, the past, or the future. Nor do events occur in isolation from material conditions or, as Delamont (1983) points out, in isolation from power relationships. Highlighting the voice and visibility of everyday people is a political act because people are defined as acting upon the world, and as inherently historical.

Intertextuality

We view intertextuality as a key concept in understanding relationships between texts (including conversational and written texts), between and among events, between events and cultural ideology, and as a starting place for understanding education as the development of communicative competence.

Intertextuality and Cultural Ideology

Whenever people engage in a language event, whether it is a conversation, the reading of a book, or diary writing, they are engaged in intertextual juxtapositions of various conversational and written texts. Intertextual links can be created between the organizational structure of texts, register levels, their genres, their content, even the situational contexts in which they occur (Lemke, 1988).

Intertextuality is a social construction in that these juxtapositions must be interactionally recognized by the participants in an event, acknowledged by those participants, and have social significance within the event (Bloome, 1989b). For example, a student responds to a teacher's question by directly reading from a textbook. The intertextual relationship between the teacher's question and the reading of the textbook is overtly recognized as appropriate from the response of the teacher and other students. In addition, the intertextuality acquires social significance in that it builds an extended text about the topic being discussed.[21] It also indexes the kind of conversation in which they were involved (classroom recitation) and the set of social relationships (among students, peers, teacher, and text). The juxtaposition of two or more texts that is unrecognized, unacknowledged, and lacks social significance is not an intertextual relationship.

Intertextuality is part of the semantic potential of language (Lemke, 1988). Within any language and culture, given a particular set of interpersonal relationships and mode of language (e.g., written or oral) at a given point in the event, there is a set of semantic potentials available. One way to realize these semantic potentials is through intertextual relationships. However, as Lemke (1988) points out, not every possible intertextual relationship (and thus, not every possible meaning) is available. Language and cultural systems define the set of meanings that are allowed in a particular event at a particular time and place, constituting the cultural ideology of that event.[22]

The set of meanings constructed through intertextuality is the intertextual substance. Intertextuality also involves intertextual processes—the ways in which intertextual meanings can be built.[23] The "rules" governing the social construction of intertextual processes also constitute part of the cultural ideology. For example, a teacher asks a question about a novel a group of students are reading. In most U.S. classrooms, it would not be appropriate for a student to respond by reading from a *Mad* magazine, even though semantically such an intertextual relationship could make sense. The cultural rules for what texts can be related at that time and that place exclude certain sets of texts.[24]

The construction and maintenance of the cultural ideology through intertextuality also depends on who gets to make what intertextual relationships and how. For example, in a particular classroom, one student may be able to make an intertextual relationship between the textbook and a television program, while another might not be allowed to establish that intertextuality. Such differences may reflect a cultural ideology defining low- and high-achieving students. Part of the cultural ideology is formed by the words used in signaling the intertextual relationship (register), where in a sequence of turns-at-talk the intertextual relationship is inserted, how its coherence to the topic being discussed and genre of ongoing conversation is established, and so on. Thus, it is not only who gets to juxtapose what texts and when, but also how.

There is a relationship between the cultural ideology of intertextual substance and intertextual process; that is, between the what and the how of intertextuality. At any particular time and place, what meanings can be realized through intertextuality, what texts can be related, and how, are dimensions of a cultural ideology which helps define a particular event. For example, in a classroom discussion, the teacher and students are trying to establish the meaning of a vocabulary word by discussing the passage from the story in which it was embedded. The teacher asks a student to look the word up in a dictionary and read the definition aloud to the class. In this event (i.e., class recitation), only a limited set of texts could be related. And the ways that these texts could be brought together, as well as the potential meanings that were available from them, were also limited. The intertextual relationships of story, classroom, conversation, and dictionary were part of that classroom's cultural ideology of "academics" and of who they were, what they were doing, what it meant, and what significance it had.

Education as Communicative Competence

In order for a student in a classroom to participate in a classroom event, he or she must demonstrate communicative competence at a variety of levels: participant structures (e.g., getting the floor), register (e.g., formal, academic), semantics (e.g., meaning of a vocabulary word), intertextuality (e.g., relationship between novel and dictionary), etc. Much of education can be viewed as a process of gaining communicative competence in academic settings. It is through participation in an event that people develop the communicative competence necessary for participating in other related events.

The intertextuality of events in which one event is explicitly related to another is commonplace in both formal and informal educational settings. In schools, labels such as "reading group," "science," and "recess" are all markers of intertextuality in that today's reading group is related to all the reading groups that the students have attended. As Borko and Eisenhart (1989) point out, students learn the language of their reading groups. Such language learning prepares them for continued participation in their reading group. However, it may not prepare them for participation in other reading groups that are "higher" or "lower" than their current group.

DeStefano, Pepinsky, and Sanders (1982), Mosenthal and Na (1980), and Bloome, Puro, and Theodorou (1989), among others, argue that students learn the language of their classroom. Students may be learning particular ways of responding to text (Mosenthal & Na, 1980), of responding to the teacher and eschewing engagement with extended written discourse (DeStefano, Pepinsky, & Sanders, 1982), or learning how to engage in procedural display (Bloome, Puro, & Theodorou, 1989). What may appear to be academic learning may reflect more the development of the communicative competence to participate in the classroom and in subgroups within the classroom (see Borko & Eisenhart, 1989).

Part of communicative competence involves becoming increasingly skilled at displays of intelligence (McDermott & Hood, 1982). In a sense, much of classroom life is geared toward creating an environment in which students learn to communicate using a standard academic dialect, the *lingua franca* of institutions of education. This aspect of institutional education begins as early as kindergarten with sharing time being used by teachers, in part, to inculcate norms for acceptable discourse in the classroom (Michaels, 1981; Cazden, 1988).

Failure to display communicative competence in a particular event effectively excludes one from the discourse. One can fail to display communicative competence in terms of the language of the social group (e.g., the reading group), and one can also fail to display communicative competence in terms of a "field stance" (Beach, this collection): the language of the discipline, the vocabulary used in social studies, the language of mathematics, the positivist view of objective knowledge used in science. Further, students have to understand the rules governing access to speaking that are operating at that particular time in that particular lesson (Schultz, Florio, & Erickson, 1982). Once the floor has been gained, the student has to display knowledge of standard academic dialect as well as what constitutes valid sources of knowledge (e.g., preference for "text knowledge" over personal experience) (Cazden, 1988). Learning how to understand and talk about social studies, science, or English literature means, in part, understanding what facts are taken to be relevant in the classroom, how knowledge is viewed, what intertextual connections are valued, and what the proper rhetoric is for presenting one's ideas and oneself (see Cook-Gumperz & Gumperz, this collection).

Final Remarks

We have discussed three issues that seem to us important foundations for one set of new directions in research in linguistics and education: event, particularity, and intertextuality. We have also discussed history, material, and dialectics as part of the realities of everyday life. We have argued that researchers need to adopt a multidisciplinary orientation that builds on conceptions of language, education, and research that have evolved over the past three decades. Based on changes in sociolinguistics, pragmatics, and cultural anthropology, the study of language has evolved from a concern with idealized language to language in use inseparable from the cultural and social contexts in which it occurs. It is no longer possible to discuss linguistic affairs without ethnographic inquiry, without situating language use, without viewing the event as primary. The study of education has evolved from a concern with teaching and test scores to education as a basic linguistic process of everyday life in homes, communities, and schools. It is no longer possible to discuss education as solely academics or to homogenize the settings and people involved in an ahistorical or unproblematic manner. Over the past three decades across the social sciences and the humanities, there has been a "blurring of genres," a cross-disciplinary inertia, grounded in a search for interpretation (Geertz, 1983) and in reflexivity (Hammersly & Atkinson, 1983). It is no longer possible to dismiss the particulars of a situation in the search for a universal or statistical generalization; nor is it possible to understand either the particulars or the universals and generalizations without each other.

It is not just that there is a rapprochement between qualitative and quantitative research, between a concern for the particular and the universal, between the social sciences and the humanities, and between empiricism and phenomenology, but rather that these distinctions no longer make any sense.

Part of our understanding of research over the past three decades is that any research effort is political, even if only in who it makes visible, who it homogenizes, and how. But it is also clear that the political nature of research is not a simple matter of advocacy for one group against another. Rather, it is a complex rhetoric—a rhetoric of dialogic action—in which various voices are orchestrated, highlighted, denied, and can emerge.

Notes

1. Other forms of language may be used as well, such as sign language, braille, nonverbal language, computer language, etc.

2. As Shuman (1986) and others have pointed out, the unit of analysis in classroom and educational research varies. The unit of analysis may be the classroom, a sequence of teacher and student behavior, an instructional task, or even the school. Our claim that the individual is the underlying unit of analysis derives from the widespread use of individual achievement tests and similar measurement devices as output measures.

3. For example, Moll (this collection) shows that research frameworks that view the individual as the locus of knowledge overlook the distribution of knowledge within a community to which all community members may have access. As a consequence, some students and some people may be viewed as unknowledgeable or incapable although they have access to and can make use of a broad-based and diverse community knowledge fund and skill reservoir.

4. We include silence, etc., as an action.

5. We use the term *social* to include both social and cultural processes and phenomena. While we recognize a distinction between social and cultural processes representing social structure, versus cultural meanings and interpretations of social action (cf. Geertz, 1983), for convenience we use *social* as a superordinate term unless otherwise indicated. This use is similar to the use of *socialization* by cultural anthropologists to refer to both enculturation and socialization.

6. Historical relationships are established at many levels. Part of what is important in the study of events is unpacking the levels at which various events are historically related to each other. For example, two classroom

events may be historically related because of their adjacency and proximity. A student may have been expelled from class during one lesson and thus not participate in a subsequent lesson, changing the group dynamics. However, two events that are not adjacent may be historically related because they involve the same set of tasks, social relationships, and labels. For example, today's reading group is historically related to yesterday's reading group as well as to all previous reading groups in which the students and teacher have participated. Historical relationships may also involve events that are not adjacent and do not have the same label. For example, today's reading group may be related to last year's factory layoffs in part because of a reduction of school revenues, resulting in a lack of material resources and larger reading groups, a change in attitude about the efficacy of school learning, and a change in children's and parents' attitudes about the security of nonprofessional jobs, thus producing an emphasis on their children doing well in school, including parental concern for reading group placement and grades. The historical relationship among events can also be based on the interpretive frameworks held by participants. For example, a kindergarten storyreading event can be historically related to a first-grade science event because of the way knowledge is constructed. In both, particular ways of integrating book knowledge and personal knowledge may be valued (cf., Heath, 1983). In sum, historical relationships occur at multiple levels and involve social construction and material connections.

7. Bakhtin describes one set of contradictory forces inherent in any event as centripetal and centrifugal, forces that tend to conformity and those that tend toward change (1981).

8. Historical and institutional factors, among others, constrain what may or may not occur in a particular event at a particular time. Thus, an utterance or other interactional behavior is a response to what has occurred, what has not occurred, and to historical and institutional constraints.

9. We recognize that our use of the word *know* in this paragraph is problematic ("But how do people know what is going on?"). *Know* suggests a cognitive process, such as recognizing the attributes of a setting and matching them with a similar set held in memory. This is not what we mean by *know*, although we do not deny that intellectual processes may contribute to how people act. Our use of *know* refers more to the historical location of people in events, the historical connections of events to each other, and the socially constructed recognition and acknowledgment by participants of their historical location, past and future. As such, *know* does not refer to an individual's cognitive processes, but to social and historical processes.

10. We recognize that our use of the word *real* is problematic. Obviously, school is real, and in school what students and teachers do is real. But we see it as real in a different sense than that usually given to the term *real*. Classroom activities are typically designed as preparation or practice to do something at a future time. It is in that sense that we view classroom activities as separated from the real world. Of course, part of what teachers and students do through their interaction is construct lessons and meet the functional needs of society for child care and education. In that specialized sense, that of doing school, classroom education is real. An extended discussion of this issue can be found in Bloome, Puro, and Theodorou (1989).

11. Even in classrooms where teachers permit or encourage student use

of knowledge from their lives outside of school, that knowledge is recontextualized by the school's agenda of doing to learn and of transforming knowledge into abstract and decontextualized knowledge.

12. This is true even in those classroom events that eschew procedural display, the absence of procedural display being a contextualizing dimension of classroom events.

13. Bakhtin and Medvedev (1978) and Vološinov (1983) are prominent among those who have argued for locating ideologies in events. They discuss and emphasize consciousness as one set of intellectual processes. In their discussions of consciousness, consciousness is located in the individual but is strongly influenced by social events and social history.

14. Hereafter, we use the term *general* to refer to both linguistic universals (e.g., innate components of grammatical structures [Chomsky, 1965]) and general patterns of language use (e.g., the prevalence of initiation-response-evaluation turn-taking protocols in classroom recitation; see Mehan, 1979).

15. Our discussion of particularism builds on discussions by Geertz (1983) and Becker (1981, 1988), although we do not claim to represent their views or meanings of particularism here.

16. The original source of the quotation is a translation of Medvedev's (1934) *Formalizm i formalisty;* however, Todorov (1984) lists the source among a chronology of Bakhtin's works, implying that Bakhtin was the real author.

17. Bakhtin (1981) viewed the novel as bringing together multiple voices which, while remaining distinct, made the voice of the novel; heteroglossia as a voice. We view events similarly; having both distinct voices while at the same time the event itself has a voice, though it is fundamentally a heteroglot voice.

18. If there is a linkage between a type of event (basal reading-group lessons) and broad social and cultural consequences, then inherently what might be particular to any one instance of that event has been obfuscated with regard to those broad social and cultural consequences identified. Also, by defining a set of events as a type of event, the particularities of an event are obfuscated or at least backgrounded (otherwise it would not be included as part of the category of that type of event). Obfuscation of the particular may be something that people do in their everyday lives (or perhaps more accurately, something that institutions do), and not just something researchers do.

19. Street (1984) distinguishes between two research models of literacy: an autonomous model and an ideological model. Street's models are roughly equivalent to our distinction between the technocratic rationale and the political rationale. As Street suggests the autonomous model to be an unacknowledged ideological model, so too, we view the technocratic rationale to be an unacknowledged political rationale.

20. Tyler (1987) provides an in-depth discussion of ethnographic writing and the presentation of the voices of those studied. Our understanding of his argument is, in brief, that ethnographic rhetoric has often silenced people rather than given them voices. In part, the silencing may have resulted from assuming language (the language of ethnographic reports) to be purely scientific and descriptive rather than rhetorical, social, and political. In part, silencing may occur by focusing on the ethnographer's experience, placing the ethnographer rather than the people being studied at the center of the rhetoric.

Silencing may also occur by merely reproducing the voices of the people being studied distinct from where they are, what they do, and their history and experience (and by assuming that such reproductions marginalize the researcher although it is the researcher who selects what to reproduce). Tyler calls for an ethnographic rhetoric that brings together the voices of the people being studied and of the researcher, a rhetoric that speaks for both.

21. Sociolinguists, such as Michaels (1981) and Cazden (1988), have raised questions about what counts as semantically appropriate. It may be the case that in any situation people disagree about whether a particular response is or is not semantically appropriate. What we mean by semantically appropriate is that the response is taken and treated as semantically appropriate by the group, the private opinions of group members notwithstanding.

22. The term *cultural ideology* is difficult to define, and it is beyond the scope of this paper to discuss its definition at length. Bakhtin defines an ideology as a system of ideas. In discussing Bakhtin's view of ideology (1986), Emerson and Holquist write:

> Ideology is semiotic in the sense that it involves the concrete exchange of signs in society and history. Every word/discourse betrays the ideology of its speaker; every speaker is thus an ideologue and every utterance ideologeme. (p. 101)

We use *cultural ideology* at several levels, as a system of ideas available to members of a society or group at any particular time, as a set of interpersonal relationships among people and institutions, as well as the actual and potential resources available for structuring interpersonal and institutional relationships.

23. We recognize that the how is part of the what. How one constructs intertextuality is part of the substance of intertextuality. We have only separated the how and the what for heuristic purposes.

24. It may be more accurate to state that a certain set of texts is included rather than only that some sets of texts are excluded.

References

Aronowitz, R. (1984). Reading tests as texts. In D. Tannen (Ed.), *Coherence in spoken and written discourse* (pp. 245–264). Norwood, NJ: Ablex.

Bakhtin, M. M. (1981). Discourse in the novel. In M. Holquist (Ed. and Trans.) & C. Emerson (Trans.), *The dialogic imagination* (pp. 259–422). Austin: University of Texas Press. (Original essay written 1935, original work published 1975)

Bakhtin, M. M. (1986). *Speech genres and other late essays*. C. Emerson & M. Holquist (Eds.), & V. W. McGee (Trans.). Austin: University of Texas Press. (Original work published 1979)

Bakhtin, M. M., & Medvedev, P. N. (1978). *The formal method in literary scholarship*. Cambridge, MA: Harvard University Press.

Bauman, R. (1982). Ethnography of children's folklore. In P. Gilmore & A. Glatthorn (Eds.), *Children in and out of school: Ethnography and education* (pp. 172–186). Washington, DC: Center for Applied Linguistics.

Becker, A. L. (1981). On Emerson on language. *Georgetown University Round Table on Languages and Linguistics 1981*, 1–11.

Becker, A. L. (1988). Language in particular: A lecture. In D. Tannen (Ed.), *Linguistics in context: Connecting observation and understanding* (pp. 17–36). Norwood, NJ: Ablex.

Bloome, D. (1989a). *Intertextuality and cultural ideology*. Paper presented at the meeting of the American Anthropological Association, Washington, DC.

Bloome, D. (1989b). *The social construction of intertextuality*. Paper presented at the meeting of the American Educational Research Association, San Francisco.

Bloome, D., & Nieto, S. (1989). Children's understandings of basal readers. *Theory Into Practice, 28*, 258–264.

Bloome, D., Puro, P., & Theodorou, E. (1989). Procedural display and classroom lessons. *Curriculum Inquiry, 19*, 265–291.

Bloome, D., & Theodorou, E. (1988). Analyzing teacher-student and student-student discourse. In J. Green & J. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 217–248). Norwood, NJ: Ablex.

Borko, H., & Eisenhart, M. (1989). Reading ability groups as literacy communities. In D. Bloome (Ed.), *Classrooms and literacy* (pp. 107–134). Norwood, NJ: Ablex.

Bruce, B. (1981). A social interaction model of reading. *Discourse Processes, 4*, 273–311.

Cazden, C. B. (1988). *Classroom discourse*. Portsmouth, NH: Heinemann.

Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.

Cicourel, A. (1981). Language and medicine. In C. Ferguson & S. Heath (Eds.), *Language in the USA* (pp. 407–429). New York: Cambridge University Press.

Cohen, S. (1986). *Historical culture: On the recoding of an academic discipline*. Berkeley: University of California Press.

Connolly, P., & Vilardi, T. (Eds.). (1989). *Writing to learn mathematics and science*. New York: Teachers College Press.

Crandall, J., Dale, T. C., Rhodes, N. C., & Spanos, G. A. (1986). The language of mathematics: The English barrier. In R. J. Di Pietro (Ed.), *Proceedings of the Delaware Symposium on Language Studies VII* (pp. 113–132). Newark: University of Delaware Press.

Delamont, S. (1983). *Interaction in the classroom* (2nd ed.). London: Methuen.

DeStefano, J., Pepinsky, H., & Sanders, T. (1982). Discourse rules for literacy learning in classrooms. In L. Wilkinson (Ed.), *Communicating in the classroom* (pp. 101–130). New York: Academic Press.

Dickson, W. P. (Ed.). (1981). *Children's oral communication skills*. New York: Academic Press.

Erickson, F., Cazden, C. B., Carrasco, R., & Maldonado-Guzman, A. (1983). *Social and cultural organization of interaction in classrooms of bilingual children*. Washington, DC: National Institute of Education.

Erickson, F., & Schultz, J. (1977). When is a context? Some issues and methods in the analysis of social competence. *The Quarterly Newsletter of the Institute for Comparative Human Development, 1* (2), 5–12.

Everhart, R. (1983). *Reading, writing, and resistance.* Boston: Routledge and Kegan Paul.

Fillmore, C. (1982). Ideal and real readers. *Georgetown University Round Table on Languages and Linguistics 1981,* 248–270.

Firth, R. (1936). *We, the Tikopia: A sociological study of kinship in primitive Polynesia.* Boston: Beacon.

Fisher, T., & Todd, A. (Eds.). (1986). *Discourse and institutional authority: Medicine, education, and law.* Norwood, NJ: Ablex.

Frake, C. (1969). The ethnographic study of cognitive systems. In S. Tyler (Ed.), *Cognitive anthropology* (pp. 28–41). New York: Holt, Rinehart and Winston.

Gage, N. (1989). The paradigm wars and their aftermath: A "historical" sketch of research on teaching since 1989. *Educational Researcher, 18* (7), 4–10.

Geertz, C. (1973). *The interpretation of culture.* New York: Basic Books.

Geertz, C. (1983). *Local knowledge.* New York: Basic Books.

Goffman, E. (1967). *Interaction ritual: Essays on face-to-face behavior.* New York: Pantheon.

Goodenough, W. (1970). *Description and comparison in cultural anthropology.* Cambridge, England: Cambridge University Press.

Goody, J., & Watt, I. (1968). The consequences of literacy. In J. Goody (Ed.), *Literacy in traditional societies* (pp. 27–68). Cambridge, England: Cambridge University Press.

Green, J. (1983). Exploring classroom discourse: Linguistic perspectives on teaching-learning processes. *Educational Psychologist, 18* (3), 180–199.

Green, J., & Harker, J. (Eds.). (1988). *Multiple perspective analyses of classroom discourse.* Norwood, NJ: Ablex.

Green, J. L., & Wallat, C. (1981). Mapping instructional conversations—A sociolinguistic ethnography. In J. L. Green & C. Wallat (Eds.), *Ethnography and language in educational settings* (pp. 161–205). Norwood, NJ: Ablex.

Grice, H. (1975). Logic and conversation. *Syntax and Semantics, 3.*

Gumperz, J. (1972). The speech community. In P. P. Giglioli (Ed.), *Language and social context: Selected readings* (pp. 219–231). Middlesex, England: Penguin.

Gumperz, J. (1986). *Discourse strategies.* New York: Cambridge University Press.

Gumperz, J., & Hymes, D. (Eds.). (1972). *Directions in sociolinguistics: The ethnography of communication.* New York: Holt, Rinehart and Winston.

Hammersly, M., & Atkinson, P. (1983). *Ethnography: Principles in practice.* London: Tavistock.

Heap, J. (1988). On task in classroom discourse. *Linguistics and Education: An International Research Journal, 1,* 177–198.

Heath, S. (1983). *Ways with words.* New York: Cambridge University Press.

Holland, D., & Quinn, N. (Eds.). (1987). *Cultural models in language and thought.* New York: Cambridge University Press.

Hymes, D. (1974). *Foundations of sociolinguistics*. Philadelphia: University of Pennsylvania Press.

Hymes, D. (1980). *Language in education: Ethnolinguistic essays*. Washington, DC: Center for Applied Linguistics.

John-Steiner, V. (1989). Is mathematics a language? In P. P. Connolly & T. Vilardi (Eds.), *Writing to learn mathematics and science* (pp. 285–290). New York: Teachers College Press.

Lemke, J. (1988). Genres, semantics, and education. *Linquistics and Education: An International Research Journal, 1*, 81–99.

Lemke, J. (1989). The language of science teaching. In C. Emihovich (Ed.), *Locating learning across the curriculum* (pp. 145–164). Norwood, NJ: Ablex.

McDermott, R., & Hood, L. (1982). Institutionalized psychology and the ethnography of schooling. In P. Gilmore & A. Glatthorn (Eds.), *Children in and out of school: Ethnography and education* (pp. 232–249). Washington, DC: Center for Applied Linguistics.

Mead, M. (1970). Our education emphases in primitive perspective. In J. Middleton (Ed.), *From child to adult* (pp. 1–13). Garden City, NY: Natural History Press.

Medvedev, P. (1934). *Formalizm i formalisty*. Leningrad [no publisher given]. (Cited in Todorov).

Mehan, H. (1979). *Learning lessons: Social organization in the classroom*. Cambridge, MA: Harvard University Press.

Michaels, S. (1981). "Sharing time": Children's narrative styles and differential access to literacy. *Language in Society, 10*, 423–442.

Mosenthal, P., & Na, T. (1980). Quality of text recall as a function of children's classroom competence. *Journal of Experimental Child Psychology, 30*, 1–21.

O'Barr, W. (1981). The language of the law. In C. Ferguson & S. Heath (Eds.), *Language in the USA* (pp. 386–406). New York: Cambridge University Press.

Odell, L., & Goswami, D. (Eds.). (1985). *Writing in nonacademic settings*. New York: Guilford.

Ong, W. (1977). *Interfaces of the word*. Ithaca, NY: Cornell University Press.

Paley, V. (1981). *Wally's stories*. Cambridge, MA: Harvard University Press.

Philips, S. (1982). *The invisible culture: Communication in classroom and community on the Warm Springs Indian Reservation*. New York: Longman.

Resnick, L. (1987). Learning in school and out. *Educational Researcher, 16* (9), 13–21.

Ricoeur, P. (1971). The model of the text: Meaningful action considered as text. *Social Research, 38*, 529–562.

Robinson, J. (1987). Literacy in society: Readers and writers in the worlds of discourse. In D. Bloome (Ed.), *Literacy and schooling* (pp. 327–353). Norwood, NJ: Ablex.

Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence, and education* (pp. 33–58). Hillsdale, NJ: Lawrence Erlbaum.

Sacks, H. (1972). On the analyzability of stories by children. In J. Gumperz

& D. Hymes (Eds.), *Directions in sociolinguistics: The ethnography of communication* (pp. 325–345). New York: Holt, Rinehart and Winston.

Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language, 50,* 696–735.

Saussure, F. de. (1959). *Course in general linguistics.* C. Bally & A. Sechehaye (Eds.), with A. Reidlinger; W. Baskin (Trans.). New York: Philosophical Library. (Original edition published 1915)

Schegloff, E. (1988). Discourse as an interactional achievement II: An exercise in conversational analysis. In D. Tannen (Ed.), *Linguistics in context: Connecting observation and understanding.* Norwood, NJ: Ablex.

Schieffelin, B., & Ochs, E. (Eds.). (1986). *Language socialization across cultures.* New York: Cambridge University Press.

Schultz, J., Florio, S., & Erickson, F. (1982). Where's the floor? Aspects of the cultural relationships in communication at home and in school. In P. Gilmore & A. Glatthorn (Eds.), *Children in and out of school: Ethnography and education* (pp. 88–123). Washington, DC: Center for Applied Linguistics.

Scollon, R., & Scollon, S. (1981). *Narrative, literacy, and face in interethnic communication.* Norwood, NJ: Ablex.

Shuman, A. (1986). *Storytelling rights.* New York: Cambridge University Press.

Smith, D. (1987). *The everyday world as problematic: A feminist sociology.* Boston: Northeastern University Press.

Snow, C. E. (1983). Literacy and language; Relationships during the preschool years. *Harvard Educational Review, 53,* 165–189.

Sola, M., & Bennett, A. T. (1985). The struggle for voice: Narrative, literacy and consciousness in an East Harlem school. *Journal of Education, 167* (1), 88–110.

Street, B. V. (1984). *Literacy in theory and practice.* Cambridge, England: Cambridge University Press.

Stubbs, M. (1986). *Educational linguistics.* New York: Basil Blackwell.

Tannen, D. (Ed.). (1982). *Georgetown University Round Table on Languages and Linguistics 1981.*

Taylor, D. (1983). *Family literacy.* Portsmouth, NH: Heinemann.

Taylor, D., & Dorsey-Gaines, C. (1986). *Growing up literate.* Portsmouth, NH: Heinemann.

Terkel, S. (1972). *Working.* New York: Ballantine.

Todorov, T. (1984). *Mikhail Bakhtin: The dialogic principle.* Minneapolis: University of Minnesota Press.

Tyler, S. (1987). *The unspeakable: Discourse, dialogue, and rhetoric in the postmodern world.* Madison: University of Wisconsin Press.

Vološinov, V. (1983). *Marxism and the philosophy of language.* L. Matejka & I. Titunik (Trans.). Cambridge, MA: Harvard University Press. (Original work published 1929)

Wallat, C., & Green, J. L. (1979). Social rules and communicative contexts in kindergarten. *Theory Into Practice, 18,* 275–284.

Weber, M. (1968). *Economy and society.* New York: Bedminster.

Wignell, P., Martin, J., & Eggins, S. (1989). The discourse of geography:

Ordering and explaining the experiential world. *Linguistics and Education: An International Research Journal, 1*, 359–392.

Willett, J. (in press). *Negotiating communicative and academic competence.* Norwood, NJ: Ablex.

Zinsser, C. (1986). For the Bible tells me so: Teaching children in a fundamentalist church. In B. Schieffelin & P. Gilmore (Eds.), *The acquisition of literacy: Ethnographic perspectives* (pp. 55–74). Norwood, NJ: Ablex.

12 Literacy Research in Community and Classrooms: A Sociocultural Approach

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For the past ten years, I, along with several colleagues, have been studying literacy as part of the larger problem of minority-group education. In particular, we have been concerned with the education of Latino or Hispanic students. As is well-known, Latino students as a group have a persistently high rate of educational failure which makes them among the most problematic groups for educators (Steinberg, Blinde, & Chan, 1984). Our work has led us to study classroom teaching, examine reading and writing instruction in English and Spanish, analyze how literacy takes place in the broader social contexts of households and community life, and attempt to understand and forge relationships between these domains of study. It is our contention that existing classroom practices underestimate and constrain what Latino (and other) children are able to display intellectually (Moll, 1986, 1988). It is also our contention that the strategic application of cultural resources in instruction is one important way of organizing change in these children's academic performance, and of demonstrating convincingly how their ample language, cultural, and intellectual resources could form the bases of their schooling (Moll & R. Díaz, 1987; Moll & Greenberg, 1990; Laboratory of Comparative Human Cognition, 1986; also see Cole & Griffin, 1987).

In what follows, I describe our most recent project with the goal of illustrating the interplay among theory, research, and practice in our work. The descriptions also illustrate the range of methodologies that becomes necessary when one tries to study literacy in connection to the complex social relationships and cultural practices of human beings, be it in classrooms or in community settings. We have termed this emphasis, inspired by Vygotsky (1978, 1987) and others (e.g., Scribner & Cole, 1981), a sociocultural approach.

In our most recent work, still in progress, we have integrated several interdisciplinary research activities into a "model system" for the study of literacy-related issues in both community and school settings.[1] Stated briefly, our model consists of three interrelated components implemented simultaneously as part of a research/teaching system: (1) an ethnographic analysis of the transmission of knowledge and skills among households in a Hispanic community of Tucson, Arizona; (2) an after-school "lab/study group" where researchers and teachers use, among other information, the household data to experiment with literacy instruction; and (3) classroom analyses in which we examine existing methods of instruction and explore how to change instruction by applying what is learned at the after-school sites (for details, see Moll, Vélez-Ibáñez, & Greenberg, 1988, 1989a, 1989b).

Our ambitious scope of work requires the participation of colleagues from several research traditions, including anthropology, psychology, and linguistics. We have also drawn on studies that examined different aspects of social life within language-minority communities (see Anderson & Stokes, 1984; Heath, 1986; Language Policy Task Force, 1980, 1982, 1984; Taylor & Dorsey-Gaines, 1988; Vélez-Ibáñez, 1983a, 1983b) and on recent studies that combine knowledge about students' home and community practices with improvements in classroom instruction (see Delgado-Gaitán, 1987; Laboratory of Comparative Human Cognition, 1986; Moll & S. Díaz, 1987; Vogt, Jordan, & Tharp, 1987). These studies show that, properly used, social and cultural practices can serve as powerful resources for the children's schooling, especially for the development of literacy. A principal task of our project has been to identify these resources and develop practical ways to harness them for use in literacy instruction.

In order to apply these resources in practice, we have also drawn on recent theoretical and practical developments emphasizing the importance of an interactive, meaning-based teaching of literacy (see Goodman, 1986; Graves, 1983; Langer, 1987; Moll, 1988; Palincsar, 1986; Wallace, 1989). These "participatory" approaches highlight children as active learners, using and applying literacy as a tool for communication and for thinking. The role of the teacher is to enable and guide activities that involve students as thoughtful learners in socially meaningful tasks. Of central concern is how the teacher facilitates the students' "taking over" or appropriating the learning activity. As Langer (1987) has suggested, "As learners assume ownership for their literacy activities . . . they are in a sense learning to master themselves—they gain control of their own abilities as literate thinkers and doers, using language to serve their own needs" (p. 7).

Particularly useful in informing and in providing coherence to our efforts are ideas borrowed from Vygotsky (1978, 1987) and other researchers in his tradition (e.g., Laboratory of Comparative Human Cognition, 1983). A full exposition of these ideas is clearly beyond the scope of this paper (see Moll, 1990a; Rivière, 1984; Wertsch, 1985; Valsiner, 1988). It may suffice to point out the connections between Vygotsky's materialist outlook and our emphasis in studying ethnographically the sociocultural practices in communities and households, practices rooted in the circumstances of everyday life. As Luria (1982), Vygotsky's closest collaborator, explained it, to understand thinking one must go beyond the human organism: "The basic difference between our approach and that of traditional psychology will be that we are not seeking the origins of human consciousness in the depths of the 'soul' or in the independently acting mechanisms of the brain. . . . Rather, we are operating in an entirely different sphere—in humans' actual relationship with reality, in their social history, which is closely tied to labor and language" (p. 27).

But humans' actual relationship with reality, as Vygotsky (1978) pointed out, is heavily mediated by social relationships, tools, and artifacts. In particular, humans use cultural inventions, signs, and tools (e.g., speech, literacy, mathematics) to mediate their interactions with each other and with their surroundings. A fundamental property of these instruments, Vygotsky observed, is that they are social in origin: they are used first to communicate with others, to mediate contact with our social worlds; later, with practice, much of it occurring in schools, these instruments come to mediate our interactions with self—to help us think, we internalize their use (see Vygotsky, 1978, chaps. 1-4; Wertsch, 1985, chaps. 2-4). From a Vygotskian perspective, therefore, a major role of schooling is to create social contexts for the mastery of and conscious awareness in the use of these cultural tools (see Moll, 1990b). By mastering these technologies of representation and communication individuals acquire the capacity, the means, for "higher-order" intellectual activity (Olson, 1986). Thus, Vygotskian theory posits a strong, dialectic connection between external (social), practical activity mediated by the use of cultural tools, such as speech and writing, and individuals' intellectual activity. As Wertsch (1985) has written, Vygotsky "defined external activity in terms of semiotically mediated social processes and argued that the properties of these processes provide the key to understanding the emergence of internal functioning" (p. 62). Accordingly, in our classroom work we have emphasized how instructional contexts are socially constituted by adults and children; and also how schooling, as a sociocultural process, mediates students' academic experiences and outcomes, including what literacy means to them (Mehan, 1989; also see Anyon, 1980, 1981; Ramsey, 1983).

In presenting two examples from our current work, I will concentrate on describing how we are using the information gained from our household analysis to develop innovations in the teaching of literacy in the schools. In doing so, I will highlight the methodological moves in studying households and classrooms and in establishing pedagogical links between them.

Household Analysis

The emphasis of our analysis has been on understanding households as social structures, with a special focus on activities and relationships within households and among networks of households. As La Fontaine (1986) has commented, "The structure of the household is also a structure of social relations, a social world in which the children have their place" (p. 25). Thus, consistent with our theoretical orientation, we are attempting to situate the study of children and of literacy within the social contexts created by these complex household relationships. These relationships, in turn, are influenced by a variety of factors, such as the personal and labor history of the family. Particularly important in our work has been understanding the households as economic units, how they function as part of a wider, changing economy, and how their material and intellectual resources are obtained and distributed through both internal and external social relationships (Vélez-Ibáñez, 1988).

Our sample consists of families within a Hispanic, predominantly Mexican,[2] working-class community in Tucson, Arizona. Tucson, like many North American cities, is a highly stratified city with a clear dual-class structure (see Vélez-Ibáñez, Greenberg, & Johnstone, 1984). For example, 75 percent of the Mexican population may be found in the lower-paid craft, assembly, service, and laborer occupations. Mexican wages are 80 percent that of Anglos, and Mexicans are twice as likely as Anglos to be below the poverty line. Further, 75 percent of Mexicans have incomes (average annual income of $14,500) that are within the lowest 25 percent of the Anglo incomes. In fact, Mexicans earn even less when the effects of education are controlled statistically. Residentially, about 75 percent of the Mexican population is concentrated in "barrios" located in the city's south side. This social and economic stratification is also reflected educationally. For example, only 27 percent of Mexicans have a median level above 13.3 years of education, in contrast to 73 percent for the Anglo population.

At the beginning of the project, we selected a total of thirty students and their families to participate in the household study. All of the students were fourth graders in the fall of 1988, so that we could follow their development over the course of the project. Approximately half of the households have children in a "treatment" school and half in a comparison school. The schools, located in the same barrio within three miles of each other, have very similar demographic and income characteristics. During the summer of 1988, at the beginning of the project, we requested that three third-grade teachers at these schools assist us in recruiting the household sample. These teachers were extremely helpful in gaining the cooperation of parents, who already knew and trusted them. Most parents readily agreed to an initial interview, at which time one of the researchers explained the purpose and nature of the project and requested the family's cooperation with the study. Nearly all of the households agreed to participate.

The primary methodology we employ in the household study is participant observation. Three types of data are collected during household visits: fieldnotes, questionnaires, and checklists. Visits to the households are always arranged by telephone ahead of time. On most occasions, a three-person research team consisting of a senior researcher and two graduate assistants conduct the visit. This approach allows for a division of labor where the researchers can alternate chatting informally, taking notes, observing, and conducting interviews. It is also a way of monitoring closely the work of the research assistants before they are allowed to conduct visits by themselves.

Fieldnotes are written up and expanded following each visit. Some notes are generally descriptive to provide context and background information, whereas others focus on topics of specific relevance to the project, such as the children's participation in a household activity. All notes are prepared using an outliner program, as soon after a visit as possible and generally within forty-eight hours. A fieldwork coordinator is responsible for debriefing the graduate assistants and offering feedback on the consistency, completeness, and depth of their fieldnotes.

A computer data bank for the fieldnotes was set up to facilitate the rapid retrieval of information in a variety of ways. A uniform file-naming system helps keep track of approximately 150 data files. These data files are also indexed to facilitate the recovery of information on particular topics. For analyses and the preparation of reports, we use a locater program that allows quick grouping and retrieval of information.

We designed questionnaires that cover several areas of relevance to this project for administration to one or both of the household heads. Questionnaire items elicit information on the household composition, daily routines, children's participation in household activities, reading practices of the parents in Spanish and English, and assessments of reading and writing skills. Draft versions of this questionnaire were pretested, first employing graduate assistants as mock respondents and then using cooperative "practice families" who were not in our sample. The information gained during pretesting not only served to refine the questionnaire but also to train graduate assistants in uniform procedures for administering the instrument.

We also developed a codebook to use during the scoring of questionnaire responses and trained all staff members in the coding procedures. For quality control, the fieldwork coordinator checks each questionnaire to be sure that it has been coded according to the established guidelines, and when necessary corrects coding mistakes. Coded responses are then entered into a data file, which also makes the information available for statistical analysis.

We have also employed a literacy checklist adapted from Gallimore and Goldenberg (1988). The checklist has columns for recording both literacy materials observed by the researchers and any literacy materials mentioned by household members during the course of a visit. For example, materials listed include books of various types, bills, calendars, legal documents, schedules, school homework, and writing paper. Literacy checklists are completed by the research team immediately following most household visits.

Some Household Findings

For present purposes, I will discuss only two aspects of our household findings that have important implications for the study and the teaching of literacy: the nature of social networks and the exchange of knowledge. In our analysis we have highlighted how households, in contrast to many classrooms, never function alone or in isolation; they are always connected to other households and institutions through diverse social networks. With our sample, these social networks function to aid the exchange of resources among households. In particular, these networks facilitate different forms of economic assistance and labor cooperation that help families avoid the expenses involved when using secondary institutions, such as plumbing companies or automobile repair shops. For families at the bottom of the social order, these networks are a matter of survival. They also serve important emotional and service functions by providing assistance of different types, most prominently in finding jobs and with child care and rearing that releases mothers to enter the labor market. In brief, these networks form social contexts for the transmission of knowledge, skills, information, and assistance, as well as for cultural values and norms (Vélez-Ibáñez, 1983a, 1983b, 1988; Greenberg, 1989; also see Wellman, 1985).

In terms of our analysis, the most important function of these social networks is that they share or exchange what we have termed "funds of knowledge." Greenberg (1989), borrowing from Wolf (1966), has suggested that an important way to understand funds of knowledge is in relation to other funds that households must manipulate for subsistence and development. The most basic are caloric funds, which are needed to sustain life. But there are other important household funds, such as: funds of rent, a charge on the households' production resulting from a superior claim on the land or housing; replacement funds, which represent the amount needed to replace or maintain minimum equipment for production and consumption; and ceremonial funds, which sustain symbolic aspects of social relationships, such as marriage ceremonies and other rituals found in the social order (particularly important with our sample; see Moll, Vélez-Ibáñez, & Greenberg, 1989b). Each of these funds, and others we could mention, entail a broader set of activities that require specific knowledge of strategic importance to households. It is these bodies of information that we have called funds of knowledge. Greenberg (1989) has referred to funds of knowledge as an "operations manual of essential information and strategies households need to maintain their well-being."

The important point here is that funds of knowledge form an essential part of a broader set of activities—social relationships—related to the households' functioning in society. These social relations facilitate reciprocal exchanges among people. The functions and content of these exchanges are varied but certainly not unique to the Hispanic community we are studying. Mechanisms of exchange constitute a general characteristic of households (Wilk, 1989). We are analyzing the specific manifestations of a general phenomenon: funds of knowledge as they occur and exist in the specific sociohistorical conditions of our study population. Similar analyses are possible in other communities, as previous work has shown (see the work of Stack, 1974, in the Black working-class community; Wellman, 1985, in Anglo middle-class communities; Vélez-Ibáñez, 1983a and 1983b, in Mexican communities in Mexico and the United States).

What is the source of these funds of knowledge? Our analysis shows that funds of knowledge are related to the social and labor history of the household members and the participants in the networks. With our sample, much of the knowledge is related to the households' rural origins and, of course, current employment or occupation. Consider the following example drawn from one of our case studies (names are pseudonyms) (Moll & Greenberg, 1990, pp. 324–325):

> The Aguilars and the Morales are typical cross-border families with rural roots, part of an extended family—Mrs. Aguilar is Mr. Morales' sister—that came to Tucson from the northern Sonoran (Mexico) towns of Esqueda and Fronteras. The Morales had a parcel of land on an *ejido*. Mr. Aguilar's father had been a cowboy, and had worked on a large ranch owned by the descendants of a governor of Sonora in the 19th century. Like his father, Mr. Aguilar is a cowboy. Although he worked for a time in construction after coming to the United States, he is currently employed on a cattle ranch near Pinal, Arizona, where he spends five to six days a week, coming home only on Tuesdays. Like Mr. Aguilar, Mr. Morales initially found work in construction, but unlike his brother-in-law, he eventually formed his own company: Morales Patio Construction. This family concern also employs his son as well as his daughter-in-law as their secretary/bookkeeper. Nevertheless, the Morales' rural roots remain strong, even idealized. In their backyard, the Morales have recreated a "rancho" complete with pony and other animals. Moreover, the family owns a small ranch north of Tucson which serves as a "recreation center" and locus for learning. They take their children and grandchildren not just to help with the chores, running the tractor, feeding animals, building fences, but more importantly to teach them the funds of knowledge entailed in these old family traditions which cannot be learned in an urban context.

Also consider the next example, from a family with an urban background (Moll & Greenberg, 1990; Moll, Vélez-Ibáñez, & Greenberg, 1989b):

> The Zavalas are an urban working-class family, with no ties to the rural hinterland. They have seven children. Their eldest daughter, however, no longer lives at home, but with her boyfriend and son. Mr. Zavala is best characterized as an entrepreneur. He works as a builder, part-time, and owns some apartments in Tucson and properties in Nogales. Mrs. Zavala was born in Albuquerque, New Mexico, in 1950 but came to Tucson as a young child. She left school in the 11th grade. Mr. Zavala was born in Nogales, Sonora, in 1947, where he lived until he finished the 6th grade. His father too was from Nogales. His father had little education, and began to work at the age of 9 to help support the family. His family, then, moved to Nogales, Arizona, where he went to school for another two years. When he was 17, Mr. Zavala left home and joined the army, and spent two years stationed on military bases in California and Texas. After his discharge, he returned to Nogales, Arizona, and worked for a

> year installing television cable and installing heating and cooling ducts. In 1967, Mr. Zavala came to Tucson, first working as a house painter for six months, then in an airplane repair shop where he worked for three years. In 1971, he opened a washing machine and refrigerator repair shop, a business he had for three years. Since 1974, Mr. Zavala works in construction part-time, builds and sells houses, and he owns four apartments (two of which he built in the backyard of his house).
>
> Everyone in the Zavala's household, including the children, is involved in informal sector economic activities to help the family. Juan, for example, who is in the sixth grade, has a bicycle shop in the back of the house. He buys used bicycle parts at the swap meet and assembles them to build bicycles, which he sells at the yard sales his family holds regularly. He is also building a go-cart, and says he is going to charge kids 15 cents per ride. His sisters, Carmen and Conchita, sell candies that their mother buys in Nogales to their schoolmates. The children have used the money they have earned to buy the family a video recorder.

The knowledge and skills that such households possess are extensive. For example, we have visited families who know about different soils, cultivation of plants, seeding, and water distribution and management. Others know about animal husbandry, veterinary medicine, ranch economy, and mechanics. Many of the families know about carpentry, masonry, electrical wiring, fencing, and building codes. To maintain health, often in the absence of doctors, some families employ folk remedies, herbal cures, midwifery, and first aid procedures. Needless to say, not every household in our sample possesses knowledge about all of these matters. But that is precisely the point. It is unnecessary for individual persons or households to possess all this knowledge; when needed, such knowledge is available and accessible through social networks of exchange.

The potential power of these networks in making knowledge and skills, intellectual resources, available to households is truly formidable. To make the point, we culled from our fieldnotes and questionnaire data all information about the knowledge available among three families in our sample, including the Morales and Zavala families mentioned earlier. We then organized this information into several categories (Fig. 1) to illustrate the extent of knowledge available in these working-class social networks. Under "agriculture" we have listed some of the knowledge derived from the household members' rural origins and current farm employment. We purposely, for the sake of brevity, did not elaborate some of the subcategories, such as animal husbandry or veterinary care, but the knowledge available in these categories is vast. Similarly under other headings, we have simply

Agriculture

Ranching and Farming
Horsemanship (cowboys)
Animal husbandry
Crop planting
Vegetable gardening
Veterinary
Knowledge of mice, crickets, cockroaches (insects)
Knowledge of domesticated and wild animals

Economic and Strategic

Business
Real estate (rentals and selling)
Market values
Appraising
Contracts
Loans
Mortgages
Property management
Institutional familiarity
Credit checks

Marketing

Labor laws
Organization of production (construction)
Building codes
Accounting
Federal regulations
Computational skills
Literacy skills
Appliance repair (refrigerators and washing machines)
Bicycle shop and go-cart builder
Welding knowledge
Sales (candies, bicycles)

Ritual and Religion

Catechism (first Communion)
Bible reading
Liturgical knowledge
Moral knowledge and ethics
Cosmic information

Material and Scientific

Construction
Carpentry
Read blueprints
Masonry (bricklaying)
Plumbing
Building fences (chain-link)
Electrical
Coolers and heating installation
TV cable installation
Painting, exterior and interior
Plastering
Design and architecture
Estimates of materials and calculating costs
Measurement skills and leveling estimates for sewer
City codes
Planning work site
Assembly of labor
Management skills
Repair of:
  Airplanes
  Automobiles
  House maintenance
  Plumbing (toilets)
  Bicycles
  Heating and air conditioning
  Washing machine and refrigerator
  Appliances
  Tractors (on farm, farm implements)
  Welding
  Fences

Arts

Art
Music
Composition
Instrumental (guitars, violins)
Vocal (sight-reading, 200 ranchero songs, writing music and lyrics, memory, fractions, tempo, rhythm, harmony, melody, recognition)
Orchestration
Band organization

Fig. 1. Domains of knowledge

Fig. 1 (continued)

Medicine

Folk medicine
Herbal knowledge
Diagnostics
Kinds and classes of animals
Kinds and classes of plants
Kinds and classes of herb mixes
Knowledge of anatomy and biology of animals
Folk veterinary medicine (cure for mastitis with crickets)
Folk cures for asthma (knowledge of chemistry of same)

Social Exchange and Culture

Social skills (exchange)
Visits
Child exchange and care
Moral support (advice)
Interpersonal skills
Conflict mediation
Caring for the sick, the elderly
Maintaining social networks
Child/adult relations: *respeto*
Child care rituals
Children caring for children
Children playing at child care
Household support or management (paying bills, smart consumer, exchange behavior)
Networks as communication systems
Brokerage system (children facing the institutions as interpreters)
Recognizing the flexible social boundaries outside immediate household: trust, reciprocity, etc.
Qualitative role-playing (in dense networks with more persons with greater opportunities for response and for conflict)
Adult child care as part of experience of a variety of institutional knowledge (school, INS, welfare, church, banks, learning limits of expected utilities, hospitals, budgets, etc.)

Education

Formal education
Parents' assistance with homework
Formal and informal
Job training
Musical training
Religious training
Ranch and farm as school
Covert theory
Self-discipline and practice ability
Good listening skills
Poetics
Household pedagogy of household tasks
Training programs for household adults
Learning by example and observation (mechanics)
Reading of manuals, *National Geographic, Time, Newsweek,* history books, blueprints, *Life,* encyclopedias, *Good Housekeeping,* bills, catalogs, self-improvement books, shopping lists, business literature, contracts, school assignments, etc.

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summarized and labeled what could be an extensive ethnography of knowledge.

A methodological point is in order about the importance of participant observation, of "being there." It is unlikely that one can identify and document these social networks and funds of knowledge unless one is present in these households and attempts to make sense of these families' activities in the context of their social and economic realities. Participant observation requires the researcher to be present in these homes, to establish a working relationship with the family members, to ask questions formally and informally, and to observe repeatedly. In fact, a household's knowledge may remain "hidden," unarticulated, until activated for purposes of assisting or teaching others. For example, during an initial visit to Mr. Aguilar's home, as the researchers and the family were discussing the project, one of the children stepped on a cricket that had come into the house. Noticing what had happened, the mother commented that if the children's father had been present, he would not have allowed the child to kill the cricket. He values the crickets for their medicinal value, she pointed out, and explained that when he worked at a ranch in Mexico he would often grind crickets to create a potion to give to cattle to cure certain stomach ailments. It turns out that Mr. Aguilar has extensive knowledge of animals and of folk veterinary medicines.

Without being there, without forming the social relationships for finding out information, one is likely to underestimate the extent of knowledge available within and among these households. Funds of knowledge, therefore, are more appropriately thought of not as possessions or traits of people in the family, but as part of what people do in activities. Therefore, our household observations suggest the importance of not only taking into account visible, apparent knowledge, where contexts of application, such as cooking a meal, are ubiquitous; but also more latent, hidden knowledge, displayed in helping or teaching others, such as cures based on medicinal herbs or the mathematics of constructing a building.

Literacy in Funds of Knowledge

In a market economy, change is constant. Economic cycles create and wipe out jobs. Similarly, advances in technology both eliminate jobs and create new ones that, however, are ever more specialized or require new training. Faced with these challenges, families have employed both formal and informal strategies to learn new skills. Although these two strategies are not mutually exclusive, they are in competition, especially when it is easier to acquire some funds of knowledge through informal means, with little cost. Formal strategies typically depend on institutional affiliations—schools, training programs, and workshops—and require significant time commitments, often money, and foregone income. Although this path offers credentials, it cannot guarantee employment and often does not provide the experience needed to get a job. In contrast, because informal strategies mobilize the resources within one's social network or depend on "on-the-job training," individuals do not have to set aside blocks of time or forego income to learn. In this context, every act of cooperation in productive activities that brings together people with different skills or different levels of skills creates new circumstances in which new bodies of knowledge may be mastered through "hands-on experience." Because informal strategies make use of every opportunity to hone new skills, even unstable employment may become an asset. Each act of assistance, each new job, however temporary, is an opportunity to learn new skills.

Literacy enters into these strategies in fundamentally different ways. Formal strategies commonly depend heavily on literacy because institutional settings are frequently divorced from contexts where knowledge may be applied. Informal strategies, in contrast, tend to depend more on oral communications and observations, as well as on trial and error. This is not to say that literacy is absent or unimportant; rather that literacy typically plays a supplementary role, that is, it is used to build on and extend existing funds of knowledge. Mr. Zavala's use of books and manuals in his washing machine and refrigerator repair business is a good example of this phenomenon. The basic funds of knowledge he uses in this business are those he learned at his father's side. But as the technology changed and became more complex, he found it necessary to study books and manuals on repair. In either case, literacy is a prevalent feature of these households; it is embedded in the acquisition and development of funds of knowledge. Literacy is an unavoidable part of life in the social and economic context in which these households function. The families in these households, as Taylor and Dorsey-Gaines (1988) have written of the families in their study, "are active participants in a social world in which text is written and read" (p. 28). In a real sense, families filter life, mediate reality, through social relationships with the use of literacy, among other tools (Moll, Vélez-Ibáñez, & Greenberg, 1989b).

Our analysis also suggests that each exchange of information or other resources includes a didactic component that is part of the activity of sharing. Sometimes this teaching is quite explicit, as when teaching someone how to build a structure or a machine (such as a bicycle) or how to use a new gadget; at other times it is implicit and depends on the participation or observation of the learner, as when the children assist the father in building an addition to the house. What we are calling a didactic component to the exchange is part of any household's pedagogy: people must teach and learn new knowledge and skills. These exchange activities are employed by people to deal with reality. In many instances the children are involved in these activities; they may be the recipients of the exchange, as observer or participant.

Yet as the Zavala example shows, these pedagogies must be understood in context: in relation to the social history of the family, the content of the funds of knowledge, and the goals of teaching (examples from Moll & Greenberg, 1990, pp. 323–324).

> Many of Mr. Zavala's funds of knowledge have their roots in his father's skills: mechanics, construction, washing machine and refrigerator repair. Mr. Zavala's father worked for many years in a gasoline station, later he worked in construction, and also repaired washers and refrigerators. When they were growing up, Mr. Zavala and his brothers often helped their father with these tasks. Unlike the elder Zavala who had little use for education, and bragged that he had gotten ahead without it, Mr. Zavala has had to rely more on formal training, schooling, and self-study to acquire the skills he has needed to get ahead. Where his father who had little education could become a jack-of-all trades through skills learned on the job, as urban labor markets have become increasingly segmented and highly specialized, it has become harder and harder to follow the path his father followed. Unlike his father, Mr. Zavala believes that education is essential. For example, to get extra training while working as an airplane mechanic, he went to welding school. Again, when he had his repair shop—though he had learned something of how to repair appliances from his father—he needed to study books and manuals on how to repair the ever more complex, new washing machines and refrigerators. Like his father, Mr. Zavala has taught practical skills to Juan by including him in domestic chores and other activities. For example, when Mr. Zavala repairs the car, he asks Juan to bring him the tools he needs. Even such minimal inclusion in such tasks allows Juan to learn by observing the whole task and by asking questions about what his father is doing. In this way Juan has learned enough to do simple repairs around the house, such as fixing the toilet by himself.

Also consider an example from the Aguilar family:

> Mr. Aguilar's son, Alfredo, often helps with [household] chores, especially when they are cooperatively organized as is common in activities involving exchange. His helping in fixing cars is typical

> of the way in which children are taught in these contexts. In activities like fixing cars, there are many potential entry points, and Mr. Aguilar lets Alfredo chip in doing things he likes to do; at the same time, he may exclude him from other tasks. Thus, Mr. Aguilar takes his cue from the child about what he would like to do, and then decides whether or not he is capable of it, if not he may suggest things that he feels are within the child's scope. Even though Alfredo's help is minimal, helping to put in screws, checking the oil, and often ends in a mess, as Mrs. Aguilar put it, *"le gusta empuercarse,"* (he likes to get dirty), his efforts are not discouraged. There seems to be an implicit understanding that even though it might be easier not to have the child's help, his participation in the whole task is an essential part of learning.

What is important about these activities is not that someone can fix a car or a toilet, but the social matrix in which these skills are acquired. Just as literacy is embedded and found directly or indirectly in most funds of knowledge activities, this didactic component is not neatly separable from the exchange of knowledge: it is contextualized, it is found within the activity, and it occurs often. These households are not socially or intellectually barren; they contain knowledge, people use reading and writing, they mobilize social relationships, and they teach and they learn. These are the systematic strategies that enhance survival within harsh social conditions.

In interesting ways, the factors that shape the role of literacy in these working-class households are very similar to those in middle-class homes. As Taylor (1983) has noted, "the interplay of individual biographies and educative styles of parents becomes the dominant factor in shaping the literate experience of the children within the home" (p. 23). Let me borrow once again from our analysis of the Zavala family (Moll, Vélez-Ibáñez, & Greenberg, 1989b):

> Reading and writing are an integral part of the Zavalas' daily activities. Although much of what Mr. Zavala reads and writes is work related—blueprints, lists of materials, trade books, and manuals—in his spare time, he also reads *National Geographic, Newsweek,* books on history, and enjoys browsing through the encyclopedia. Mrs. Zavala's use of literacy is more varied. She is in charge of reading and signing school papers. She writes greeting cards, shopping lists, recipes, notes to remind her children of household chores and family members of appointments. She reads *Time, Life, Good Housekeeping.* Her reading also includes a lot of self-improvement books on parenting, such as *How to Build Self-Esteem in Your Child, Read Out Loud to Your Child, How to Put Brain Power into Your Child, Classics to Read to Children,* and *Loving Each Other.*
>
> Mrs. Zavala is one of the most literate persons in the sample,

> and her reading reflects her concerns with her children's well-being. The Zavalas are committed to schooling. Both parents are deeply involved in school activities. Mrs. Zavala assists in preparing food for various school events, attends PTA meetings, Mr. Zavala is similarly involved with the school. He participates in school field trips, in the "story-telling" program at the public library, and has attended several computer workshops held for parents so they may assist their children with computer work. As well, both parents read stories to their children. Mr. Zavala often takes the three younger children to buy books at book fairs. Mrs. Zavala takes them to the public library at least once a week, she reports. School work is taken very seriously. Homework must be done, before they are allowed to play. Both parents assist the children with their assignments. For example, when Juan does not understand the Spanish instructions, he will ask his mother to translate them into English. If they are no clearer to him in English than in Spanish, she will rephrase them in various ways until she is sure he had grasped its meaning. What is interesting here is that even though Juan asks for help, Mrs. Zavala does not take over the assignment, but limits her role to assisting the child's performance.

Our study illustrates the "fluid reality" of the households, the changes in household composition, residence, jobs, and social relations; it is within this fluidity, within these social dynamics, that the experiences of children must be understood. In all cases, as La Fontaine (1986) has asserted, children are participants in the household activities, not merely bystanders. In some cases their participation is central to the household's functioning, as when the children contribute to the economic production of the households or mediate linguistically the household's relationships with outside institutions, such as the school or government offices. Sources of education are not solely what goes on in school, but this totality of household experiences, this diversity of social life, that are part of every child's learning environment (Leichter, 1978).

Classroom Work

We started the project by building on the explicit assumption that the Hispanic community represents a resource of enormous importance for educational change and improvement. Our research during the last several years has confirmed the validity of this assumption and has extended our understanding of the community as a resource and of how to apply that resource to educational practice. Our analysis of households' funds of knowledge can help redefine Hispanic families for educators and others (such as psychologists) involved in education and transform their reactions to these families. The idea that these families are somehow devoid of abilities and skills is simply erroneous, as we have already discussed. The common view that their children suffer from a deficit of "funds of background experience" is seriously challenged by our work. From our perspective, these families represent a major social and intellectual resource for the schools. The extent of their funds of knowledge justifies our position that the community needs to be perceived by others, especially educators, and probably by the community itself, as having strength or power, as having resources that schools cannot ignore.

In an important sense, the schools are in a situation analogous to the households we are studying. All schools believe that they need more resources in addressing the needs of students, especially if these students are minority children and from poor neighborhoods. It is common for teachers to bemoan the scarcity of resources. These resources are usually thought of as material resources, for example, the need for better books or more computers. On occasion the need for additional resources is expressed as needing more parental support for the teachers and their work, such as having parents help with homework. Dealing with scarcity of resources, however, is an everyday issue in the households. The exchange of funds of knowledge, as we have explained, is a major strategy to deal with the lack of resources, a strategy developed to harness, control, and manipulate resources. The idea is to do the most with what you have.

In contrast to the households and their social networks, however, classrooms and teachers function in relative isolation. As Sarason (1982) has commented, "teachers are psychologically alone even though they are in a densely populated setting" (p. 133). In contrast to households, where relationships are multi-stranded, the teacher-student relationship is usually single-stranded, where the teacher possesses knowledge and the student is the intended recipient of that knowledge; there is surprisingly little deviation from that single-stranded relationship.

We believe that our household analysis provides us with insight into how to organize change in the ways teachers work, how to redefine existing resources, and how to relate to the households so that resource exchanges can occur. We suggest that through the creation of social networks and through the mobilization of funds of knowledge, teachers can take advantage of the abundant "social capital" of the community (Coleman, 1987, 1988). This model of reciprocal exchange provides new ways of defining the families as important resources, a novel vehicle for currently unused social and intellectual resources to be applied in instruction.

How can additional resources be made available to classrooms in ways that are not only helpful to teachers and students but that at the same time benefit the households, contributing to the households' funds of knowledge? Sarason (1982, p. 276) has suggested that these types of assistance are not accomplished unless certain conditions are met:

1. One must accept the fact that professional resources will never be made available to the degree required by the traditional definition of resources. The problems of schools have not been resolved and will not be resolved by reliance solely on professionals.
2. One has to believe that there are diverse types of people that can be helpful in the classroom even though they do not have professional credentials. Wisdom and imaginativeness are distributed in the same way among professional and nonprofessional groups.
3. The crucial task is how to locate, select, and train these new resources so that their own needs for new and productive experiences are met at the same time they are helping to meet those needs in others.
4. School personnel have to see themselves as resource locaters and coordinators, constantly scanning school and community in order to match needs in a mutually productive manner.

In short, teachers need not be isolated or alone in addressing the needs of the children; they can develop social networks of assistance. In line with Sarason's suggestions, our work indicates the importance of creating reciprocal, exchange relations with households; that is, the importance of utilizing the households' funds of knowledge in teaching, while becoming part of the households' social networks. Typically, the less access to formal sectors, the greater the reliance of households on reciprocal networks for survival. Similarly, the less access to (or knowledge of) formal schooling, the greater the need for situating schooling within the adaptive strategies that the households employ.

Our initial attempts to mobilize funds of knowledge for teaching indicate three promising paths that we are exploring further in the project.

Collaboration with Teachers

If anything has become clear in our work, it is the need for teachers to be involved and informed in the research activity. To put it more forcefully: no innovation has a realistic chance of succeeding unless teachers are thoroughly involved in the process, unless teachers are able to express, define, and address problems as they see them, unless teachers come to see the innovation or the change as theirs. The ultimate outcome of the innovation (or of a replication, we could add) depends on when and how teachers become part of the decision to initiate change. We are, of course, not the first to make this point (Tharp & Gallimore, 1988; Wallat, Green, Conlin, & Haramis, 1981), but it remains one of the most ignored aspects of developing and implementing innovations in classrooms (Sarason, 1982).

Methodologically, our primary strategy for involving teachers substantively in the project has been to develop an after-school "lab" that includes teachers and students. In particular, our work has led us to highlight the formation of a teachers' study group. This study group represents a social context for informing, assisting, and supporting teachers' performances; it is an activity setting where teachers and researchers get together to study teaching, to learn about the households, and to develop innovations; it is also a self-assisting group where teachers help themselves. This is a key issue. Tharp and Gallimore (1988), for example, have identified the creation of settings for joint productive activity (of the sort we advocate) as the single most important factor in successful innovations, in producing change in education. What they mean by settings for joint productive activity are settings that facilitate long-term collaborative work between researchers and teachers, and among teachers themselves, in the service of helping teachers teach. As Tharp and Gallimore expressed it: "Until opportunities for assisted performance become a standard part of teacher education and training, no new conception or theory of teaching and instruction will supplant the ubiquitous recitation" (1988, p. 271). This point is even more relevant given our study population. What they mean by "ubiquitous recitation" is the standard, pervasive, rote-like instructional approach; teachers hold all knowledge and answers and control all classroom activity, and students passively receive the curriculum. We have written elsewhere about the prevalence of this sort of instruction with working-class students, regardless of whether they are bilingual or monolingual (Moll, 1988; cf. Anyon, 1980; Oakes, 1986).

We are currently meeting with ten teachers every week for one and one-half to two hours as part of a study group, then arranging additional meetings as needed. Two of the main topics of discussion at the study groups are implementing meaning-based literacy instruction and mobilizing funds of knowledge. The study group has become a key setting and vehicle for analyzing instructional practices and planning change, and for analyzing the utility of funds of knowledge for teaching. Three additional topics have also dominated discussions. One is that the teachers have identified their interests and concerns (most prominent, the reading development of the children) as well as their constraints, helping us think of innovations that address their needs in the classroom. Another important issue has been assessment. We have discussed the collection of child impact measures and the teachers are collecting similar data (especially retellings in both languages and writing samples) from some of their students to help us determine how these data may be useful for teaching (more on this later). Along similar lines, we have started developing student portfolios as a way of making the data useful for instruction and assessment.

A second aspect of our after-school lab has been working directly with students to experiment with instruction. During the first phase of the project we met with some success in developing and implementing such a lab; in fact, it led to the implementation of several informative literacy activities (Moll, Vélez-Ibáñez, & Greenberg, 1989a). The main drawback of this innovation was involving the teachers. We could interest the teachers in what we were doing with the children, and they would visit the lab setting occasionally, but we were unable to secure teachers' active and regular participation in the activities. They perceived the lab as removed from their classroom work, isolated from their classroom experiences. This lack of participation suggested the need to create an additional setting where the teachers could address issues of concern with our assistance, where they could have direct input into developing activities and the reasons for the activity. We tried out the study-group format with success during the past year and generalized the strategy to others in the project. We still think it important to develop settings in which to try out innovations with children before implementing them in classrooms. But we recognize that the development of these settings must result from joint productive activities with teachers and not be something researchers develop independently of teachers and then try to lure teachers into participating.

Developing Meaning-Based Literacy Instruction

Central to our work is how teachers mediate learning, how they help create the educational reality of the children. We have discussed with the teachers different ways of organizing literacy instruction, particularly so that teaching is more interactive and more comprehension-driven or meaning-centered (see Langer & Applebee, 1986, 1987; Moll, 1988). As one teacher put it, the goal is to have students discuss text as they would a personal relationship, intimately, or as they would a television novella (a "soap opera"). We believe that a meaning-centered model of reading allows bilingual students to take full advantage of their first-language abilities and to surpass the limits set by their more limited knowledge of their second language (see Moll, 1988; Weber, 1989; Devine, 1988). We have made similar claims about teaching writing as communication (Moll & R. Díaz, 1987). Teachers who have more experience with such approaches to literacy instruction have provided examples and invited the other teachers to observe in their classrooms. We have also provided research articles on this general topic. All of the teachers in the study have started to experiment with new approaches to literacy instruction or with extending what they are currently doing in their classrooms. We also have introduced more dynamic methods of assessment to go along with meaning-centered approaches, including the collection of reading retellings and writing samples in Spanish and English.

In no way, however, are we underestimating the difficulty of the process we have undertaken and the time needed to establish new literacy routines in classrooms. A major problem of single projects or studies, as Sarason (1982) has emphasized, is assuming that one can program change by the calendar: "Any attempt to change regularities in the classroom places the teacher in an unlearning and learning process, a fact that has obvious implications for the time perspective of those seeking change" (p. 286).

Mobilizing Funds of Knowledge

The concept of funds of knowledge refers both to the content and to the social relationships that facilitate the exchange. We believe that both aspects are salient for classroom practice: the abundance of knowledge (the content) and the social relations for exchange. A key to the utility of exchange networks for a household's functioning is that they are flexible and adaptive. This flexibility allows the resources developed for and applied to one activity to be rechanneled for application to another activity. This flexibility and adaptability make it feasible to conceptualize rechanneling funds of knowledge for classroom practice; herein lies the potential to influence classroom practices, as the next example (borrowed from Moll & Greenberg, 1990) illustrates.

Extending Classroom Relations for Learning

Ina A. was a sixth-grade teacher in a school located in one of the Mexican barrios. She taught in a bilingual program and her students were mostly Spanish-dominant Mexican children. Along with another teacher, she was responsible for Spanish reading for the intermediate students in her school. She is a native of Mexico and has lived in Tucson for approximately five years. She has been teaching for four years.

Ina A.'s classroom consisted of twenty-seven students. She used the basal reader in her classroom but supplemented it with novels, newspaper and magazine stories, and poems. Although she tried to get the class to write frequently—especially poems, short stories, narratives, and descriptions—she reported that the students were very reluctant to write. After meeting with us and attending the lab, she decided to develop an instructional unit based on a topic of interest to the students and within which she could include a lot of reading and writing. After discussing it with her students, she selected the topic of construction. Although she was concerned that she knew nothing about the topic, she realized that the community possessed abundant knowledge about construction; she could identify these resources and bring them into the classroom to develop her lessons. She was also concerned with how parents perceived the school; she believed that parents felt they didn't belong, but was sure that parents were interested in their children's schooling and willing to help.

We have presented elsewhere a more detailed analysis of Ina A.'s work, including samples of the students' writing (Moll & Greenberg, 1990). Here we want to describe how she established a social network to bring "living knowledge" from the community into her classroom (summarized in Fig. 2). She started by introducing and clarifying to her students the idea of the unit and how it involved research about a topic or theme. As a first step, she asked the students to visit the library and start locating information about building or construction. In particular, students obtained numerous books and magazines, including materials on the history of dwellings and on different ways of constructing structures. Through her own research in a community library and in the school district's media center, the teacher identified and brought into the classroom a series of books on construction and on different professions, and some volumes on architects and carpenters. Students followed their initial library research by building a model house or other structure as homework and by writing brief essays describing their research and explaining their construction. The students

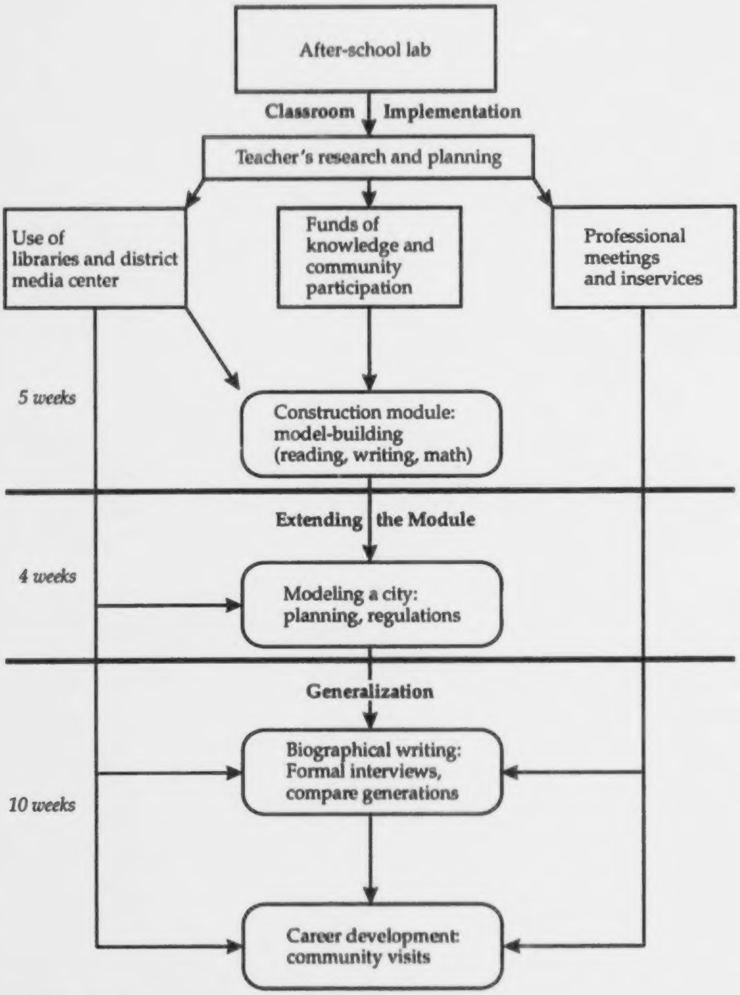
After-school lab
Classroom
Implementation
Teacher's research and planning
Use of libraries and district media center
Funds of knowledge and community participation
Professional meetings and inservices
5 weeks
Construction module: model-building (reading, writing, math)
Extending
the Module
4 weeks
Modeling a city: planning, regulations
Generalization
Biographical writing: Formal interviews, compare generations
10 weeks
Career development: community visits

Fig. 2. Theme units in Ina A.'s classroom

wrote in either Spanish or English, it did not matter: the goal was to describe their work and their ideas.

The activity, however, did not stop there. Building on students' initial research and their success, the teacher proposed that the class invite parents as experts to provide additional information on specific aspects of construction. She mentioned that she had already invited one father, a mason, to describe his work. She was particularly interested in the father describing his use of construction instruments and tools, and how he estimated or measured the area or perimeter of the locations in which he works. The children were surprised that the teacher wanted to invite their parents, especially given some of the parents' lack of formal schooling, but were intrigued by the idea.

These initial visits by parents were a key to the activity's success. Neither the teacher nor the students were sure what to expect. The teacher described it as follows (Moll & Greenberg, 1990):

> The first experience was a total success. . . . We received two parents. The first one, Mr. S., father of one of my students, works at [the school district] building portable classrooms. He built his own house, and he helped my student do his project. He explained to the students the basic details of construction. For example, he explained about the foundation of a house, the way they need to measure the columns, how to find the perimeter or area . . . After his visit, the children wrote what they learned about this topic. It was interesting to see how each one of them learned something different: e.g., the vocabulary of construction, names of tools, economic concerns, and the importance of knowing mathematics in construction.

Building on this initial visit, the teacher invited other parents and community members to make their expertise available to the class. Quoting again from the teacher's notes:

> The next parent was Mr. T. He was not related to any of the students. He is part of the community and a construction worker. His visit was also very interesting. He was nervous and a little embarrassed, but after a while he seemed more relaxed. The children asked him a great number of questions. They wanted to know how to make the mix to put together bricks. . . . He explained the process and the children were able to see the need for understanding fractions in mathematics because he gave the quantities in fractions. They also wanted to know how to build arches. He explained the process of building arches through a diagram on the board, and told the students that this was the work of engineers.

The teacher also invited people within her own social network to contribute to the class. What is important is that the teacher invited parents and others in the community to contribute substantively, *intellectually*, to the development of lessons. In our terms, the teacher started forming a social network to access funds of knowledge for academic purposes. The parents came to share their knowledge, expertise, or experiences with the students; they became a cognitive resource for the class. The reciprocity for the parents was in the academic payoff for the students. The adults' funds of knowledge became part of the students' work or a focus of analysis, as illustrated eloquently in the following English writing sample from one of the girls in the class (Moll & Greenberg, 1990):

> Mr. S. came today and in a way he taught us how to build a house. He taught us how to measure for the materials and which materials we needed and how to get the best only. He also taught us that if you buy an expensive house from a company it may be made from real cheap stuff and just maybe it might fall apart. And that if you build a house without a ridge or varillas it may tip over and just fall apart. When you are putting the ridge you must put an joist hanger or the ridge will fall. Also you must put cement first then you put in the varillas. For the wall the plywood fir is better than the waffle board. But the waffle board is cheaper than plywood fir. And that for the door and the window you put a metal board for it could hold the material or blocks. He also said that if you paid another worker that isn't from the company he might cheat you, like tell you to pay by the hour. And then they'll take a long time. So then you have to pay them more because they worked more hours. If you do it yourself you might save, I said you might because if you don't know you will be wasting a lot of money because will not be knowing what you are doing . . . and if you are paying the worker how much both of you decided they might do it real fast. He also said that you'll need to put at least 3 or 4 feet of cement above the ground so that termites do not go in. And that the bottom of the plywood or what ever you are using people put some termite poison. But well it is better to have a brick house and to build it yourself because you might save a lot of money.
>
> If you do not know how to make your own home or just a storage room like Mr. S. you might want a friend to help. You should also know the size or amount of the wood, bricks, nails, or any other supply that you might need so that you don't spend a fortune or a lot of money on some dum storage room that you didn't even do right and that in a week it'll fall down.
>
> So if you are wanting a house or just a room make sure you know what you're doing. Take my advise I listened to someone who does know. Don't try to do it yourself because you'll probably end up with nothing because it'll probably fall. He also showed the size of some nails and other supplies.

These visits created new instructional routines in this classroom which helped the teacher and students exceed the curriculum, stretch the limits of writing, and expand the knowledge that formed lessons.

Establishing social networks to access funds of knowledge generated important secondary activities in this classroom that went far beyond the initial unit. For example, the class invited one student's brother, studying to be a draftsman, to present construction plans to the class and explain how he developed them. Stimulated by the presentation, the students decided to extend the module by going beyond the building of individual structures to combine them to form a community. But developing a community with its streets, services, parks, and private and public buildings required additional knowledge. The students and the teacher followed two strategies. They returned to the library to do research, acquiring additional information about what a town or city requires for its development, for example, obtaining water and providing electricity. To supplement the library research, students conducted observations in their own communities to determine what other aspects of urban life they might need to incorporate into their model. The teacher provided the class with a large poster of a town, which she found during her own research, and the students placed it on the side wall of the class, near their models. As was now routine, part of the classroom task was for students to present their research in writing and to share it orally with the class or with others in the school.

In total, about twenty people visited the classroom during the semester. The teacher utilized at least seven different sources of funds of knowledge, among them the students' own knowledge, the students' parents and relatives, other students' parents or relatives, the teacher's own network, school staff and teachers, other community members without school-age children, and university faculty and students. These visits shaped the students' and the teacher's perception of the parents and the community in general. In a sense, the teacher convinced herself that valuable knowledge existed beyond the classroom and that it could be mobilized for academic learning. She also understood that teaching *through* the community, as represented by the people in the various social networks and their collective funds of knowledge, could become part of the classroom routine or of the "core" curriculum. All of the activities, from the planning and interviewing to the preparation of a final product, involved considerable reading and writing in both languages on the part of the students. As part of their work the students were actively engaged in using literacy for communication and thinking. Throughout the activity, the teacher helped mediate the students' interactions with text and with the social resources made available to develop their analysis.

Toward a Biliteracy Analysis

Our household and classroom work suggest the importance of thinking about literacy and about the consequences of literacy in fundamentally new ways, beyond the skills of reading and writing, and as intimately related to broader social and cultural practices. We must think of literacy (or literacies) as particular ways of *using* language for a variety of purposes, as a sociocultural practice with intellectual significance. As Olson (1987), among others, has suggested, to become literate is to gain access to the valued resources of the culture: "For literacy to function as an intellectual resource, it must involve learning the means to exploit the resources of a literate culture including its literary, religious, scientific, and governmental resources" (p. 7). What matters then, especially in schools, is not what literacy does to students, but what students do with literacy (Olson, Torrance, & Hildyard, 1985).

This social perspective is especially valuable in bilingual classrooms, where the special linguistic characteristics allow students and teachers to access broader and more diverse sociocultural resources for thinking, more abundant funds of knowledge. From our point of view, the intellectual power of bilingualism is in how it serves to amplify and extend the social resources available for teaching and learning, and in how biliteracy allows children to participate in new and more advanced contexts for learning. We agree with Langer (1987) that it is necessary "to look for successful literacy learning not in isolated bits of knowledge, but in students' growing ability to use language and literacy in more and broader activities. It will also be necessary to judge progress in learning by students' ability to successfully complete those activities. When we do this, the nature of instructional activities will change dramatically—from pretend to real tasks, from parts to wholes, from practice to doing, and from recitation to thinking" (p. 17).

In addition, our analysis of the students' reading and writing itself builds on the assumption that language is thoroughly social (or sociological) in its acquisition, development, and use; further, it builds on the assumption that its significance is in the production and reception of meaning. For example, we have initiated an extensive analysis of biliteracy as part of our evaluation of the project. As of this writing, we have collected writing samples in English and in Spanish from approximately 300 students. To analyze the samples, we have developed a holistic rating that emphasizes the communication of meaning by the students, and that attempts to relate the students' writing in Spanish to their writing in English.[3] A proficient bilingual reader first reads both samples silently, for meaning, to get a better idea of the

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range of the student's writing and a sense of the strengths of the student in either language. After carefully evaluating readability (whether the text makes sense), syntax, spelling, and punctuation are assessed. Our preliminary findings suggest the great importance of invented spellings in facilitating writing development in two languages. We found that most frequently used words in either language are usually spelled conventionally; the mistakes are in the infrequently used words. But these are not really mistakes, they are invented spellings, more analogous to miscues in reading, semantically appropriate miscues (Goodman, Watson, & Burke, 1987). They are attempts by the writer to communicate, to extend himself or herself in writing, to take risks in writing. These are ways to privilege meaning over convention, to extend the limits imposed by their still-developing control of convention. We think that they are key in developing written competence in both languages, but especially in the second language (see Edelsky, 1986). We also know that these are the very same unconventional spellings that are routinely corrected and scorned by teachers. Our analysis points to the importance of writing often and writing freely and in both languages, of providing students with practice in different genres as part of developing their writing competencies, and of interpreting the mistakes in spelling in the context of the intent to communicate, as a sign of the developing competence of the children.

Similarly, we have collected reading samples in English and in Spanish from approximately 150 randomly selected students in Grades 4, 5, and 6. These reading samples consist of student retellings of stories. Our procedures, individually administered, followed these four steps: the student read aloud a story to the researcher or teacher; this "reading" was followed by the student's unaided retelling of the story to the researcher in order to determine comprehension; this was followed by an aided retelling, where the attempt was to "stretch" the student's comprehension; and finally, there was a cross-language check, where the student was asked to continue the retelling in a second language. All of the readings and retellings have been audiotaped. We have started an analysis using holistic ratings of the retellings and a more detailed miscue analysis of a subsample. As with the writing samples, we are impressed by the utility of a bilingual analysis. For example, many children display considerable difficulty decoding the text in English and with the retellings in English, but during the cross-language check (in Spanish) they describe fully what the story is about. Results such as this suggest that it is insufficient to evaluate bilingual readers solely in one language; we might underestimate the children's true reading capabilities.

The emphasis with both analyses is to gain a more dynamic, qualitative, meaning-based understanding of the development of literacy in two languages, an understanding more in line with the "interactive," meaning-based pedagogy we advocate.

Conclusion

I have presented an approach to the study of literacy in school and community settings that has as its central premise the inseparability of the individual from the social. I have argued that there are great advantages to this sociocultural approach, as well as difficult methodological requirements. One advantage is that in studying human beings dynamically, within their social circumstances, in their full complexity, we gain a much more complete and, I believe, a much more valid understanding of them. We also gain, particularly in the case of minority children, a more positive view of their capabilities and how our pedagogy often constrains, and just as often distorts, what they do and what they are capable of doing.

The methodological challenge implicit in this approach is considerable, especially the need for diverse data sources. As part of the same study, we have collected data through participant observations, questionnaires, checklists, audiotapes, and videotapes. We have also used different types of tests and instruments that yield both quantitative and qualitative findings, and compiled all sorts of archival materials. Our classroom sample includes three comparison classrooms matched carefully on the basis of demographic and income data, and we sampled randomly as part of our testing procedures. We have established procedures to ensure the quality control of data, including hiring a full-time fieldwork coordinator who has as a central task the training and monitoring of performance of about twelve research assistants.

But the methodological headaches are worth it. Taylor (1989) has put it forcefully: "Our task as social scientists is to try to understand the complexity of the literacy behaviors of young children, and our task as educators is to use these understandings to support and enhance children's learning opportunities. We can provide guidance in both direct and indirect ways as they develop their own personal understanding of literacy—understandings that are both socially constructed and individually situated in the practical accomplishments of everyday life" (p. 193).

Notes

1. I am conducting this work in close collaboration with Carlos Vélez-Ibáñez and James B. Greenberg, both from the Bureau of Applied Research in Anthropology, University of Arizona, as co-principal investigators. Thus, the study represents a true joint effort between colleagues in education and in anthropology. The project is funded by the Office of Bilingual Education and Minority Language Affairs of the Office of Education, Washington, DC. We are grateful for their support.

2. Following Vélez-Ibáñez (1988), we are using the term *Mexican* to designate persons native-born of Mexico as well as those of Mexican parentage born in the United States. This designation is also consistent with the self-descriptions of the persons, regardless of generation, in our study sample.

3. For example, the categories of the instrument include (a) the degree of readability for the audience; (b) whether the text flows logically; (c) whether the syntax is appropriate for the genre selected; (d) whether spelling interferes with readability; (e) whether punctuation interferes with readability; and (f) the influence of one language on the other.

References

Anderson, A. B., & Stokes, S. (1984). Social and institutional influences on the development and practice of literacy. In H. Goelman, A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (pp. 158–184). New York: Heinemann.

Anyon, J. (1980). Social class and the hidden curriculum of work. *Journal of Education, 162* (1), 67–92.

Anyon, J. (1981). Social class and school knowledge. *Curriculum Inquiry, 11,* 3–42.

Cole, M., & Griffin, P. (Eds.). (1987). *Contextual factors in education.* Madison: University of Wisconsin, Wisconsin Center for Education Research.

Coleman, J. S. (1987). Families and schools. *Educational Researcher, 16* (6), 32–38.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94* (Suppl.), 95–120.

Delgado-Gaitán, C. (1987). Traditions and transitions in the learning process of Mexican children: An ethnographic view. In G. & L. S. Spindler (Eds.), *Interpretive ethnography of education: At home and abroad* (pp. 96–123). Hillsdale, NJ: Lawrence Erlbaum.

Devine, J. (1988). A case study of two readers: Models of reading and reading performance. In P. L. Carrell, J. Devine, & D. E. Eskey (Eds.), *Interactive approaches to second language reading* (pp. 127–139). New York: Cambridge University Press.

Edelsky, C. (1986). *Writing in a bilingual program: Había una vez.* Norwood, NJ: Ablex.

Gallimore, R., & Goldenberg, C. (1988). *The social context of emergent Spanish* *literacy among Hispanic children*. Grant proposal submitted to the Spencer Foundation.

Goodman, K. (1986). *What's whole in whole language?* Portsmouth, NH: Heinemann.

Goodman, Y., Watson, D., & Burke, C. (1987). *Reading miscue inventory: Alternative procedures*. New York: Richard Owen.

Graves, D. (1983). *Writing: Teachers and children at work*. Exeter, NH: Heinemann.

Greenberg, J. B. (1989, April). *Funds of knowledge: Historical constitution, social distribution, and transmission*. Paper presented at the annual meeting of the Society for Applied Anthropology, Santa Fe, NM.

Heath, S. B. (1986). Sociocultural contexts of language development. In California State Department of Education, Bilingual Education Office (Ed.), *Beyond language: Social and cultural factors in schooling language minority students* (pp. 143–186). Los Angeles: California State University, Evaluation, Dissemination and Assessment Center.

Laboratory of Comparative Human Cognition. (1983). Culture and cognitive development. In W. Kessen (Ed.), *Handbook of child psychology: Vol. 1. History, theory, and methods*. (4th ed., pp. 295–356). New York: John Wiley & Sons.

Laboratory of Comparative Human Cognition. (1986). Contributions of cross-cultural research to educational practice. *American Psychologist, 41*, 1049–1058.

La Fontaine, J. (1986). An anthropological perspective on children in social worlds. In M. Richards & P. Light (Eds.), *Children of social worlds: Development in a social context* (pp. 10–30). Cambridge, England: Polity.

Langer, J. (1987). A sociocognitive perspective on literacy. In J. Langer (Ed.), *Language, literacy, and culture: Issues in society and schooling* (pp. 1–20). Norwood, NJ: Ablex.

Langer, J., & Applebee, A. (1986). Reading and writing instruction: Toward a theory of teaching and learning. In E. Z. Rothkopf (Ed.), *Review of research in education* (pp. 171–194). Washington, DC: American Educational Research Association.

Langer, J., & Applebee, A. (1987). *How writing shapes thinking: A study of teaching and learning* (NCTE Research Report No. 22). Urbana, IL: National Council of Teachers of English.

Language Policy Task Force. (1980). *Social dimensions of language in East Harlem* (Working Paper No. 7). New York: Hunter College, Centro de Estudios Puertorriqueños.

Language Policy Task Force. (1982). *Intergenerational perspectives on bilingualism: From community to classroom*. New York: Hunter College, Centro de Estudios Puertorriqueños.

Language Policy Task Force. (1984). *Speech and ways of speaking in a bilingual Puerto Rican community* (Report No. NIE-G-81-054). Washington, DC: National Institute of Education.

Leichter, H. J. (1978). Families and communities as educators: Some concepts of relationship. *Teachers College Record, 79*, 567–658.

Luria, A. R. (1982). *Language and cognition*. New York: John Wiley.

Mehan, H. (1989). *Understanding inequality in schools: The contribution of interpretive approaches*. Paper presented at the meeting of the American Sociological Association, New York.

Moll, L. C. (1986). Writing as communication: Creating strategic learning environments for students. *Theory Into Practice, 25*, 102–108.

Moll, L. C. (1988). Some key issues in teaching Latino students. *Language Arts, 65*, 465–472.

Moll, L. C. (Ed.). (1990a). *Vygotsky and education*. New York: Cambridge University Press.

Moll, L. C. (1990b). Introduction. In L. C. Moll (Ed.), *Vygotsky and education* (pp. 1–27). New York: Cambridge University Press.

Moll, L. C., & Díaz, R. (1987). Teaching writing as communication: The use of ethnographic findings in classroom practice. In D. Bloome (Ed.), *Literacy and schooling* (pp. 195–222). Norwood, NJ: Ablex.

Moll, L. C., & Díaz, S. (1987). Change as the goal of educational research. *Anthropology and Education Quarterly, 18*, 300–311.

Moll, L. C., & Greenberg, J. (1990). Creating zones of possibilities: Combining social contexts for instruction. In L. C. Moll (Ed.), *Vygotsky and education* (pp. 319–348). New York: Cambridge University Press.

Moll, L. C., Vélez-Ibáñez, C., & Greenberg, J. (1988). *Project implementation plan: Community knowledge and classroom practice: Combining resources for literacy instruction* (IARP Subcontract No. L-10, Development Associates, Inc.). Tucson: University of Arizona, College of Education and Bureau of Applied Research in Anthropology.

Moll, L. C., Vélez-Ibáñez, C., & Greenberg, J. (1989a). *Year one progress report: Community knowledge and classroom practice: Combining resources for literacy instruction* (IARP Subcontract No. L-10, Development Associates, Inc.). Tucson: University of Arizona, College of Education and Bureau of Applied Research in Anthropology.

Moll, L. C., Vélez-Ibáñez, C., & Greenberg, J. (1989b). *Fieldwork summary: Community knowledge and classroom practice: Combining resources for literacy instruction* (IARP Subcontract No. L-10, Development Associates, Inc.). Tucson: University of Arizona, College of Education and Bureau of Applied Research in Anthropology.

Oakes, J. (1986). Tracking, inequality, and the rhetoric of school reform: Why schools don't change. *Journal of Education, 168*, 61–80.

Olson, D. R. (1986). Intelligence and literacy: The relationship between intelligence and the technologies of representation and communication. In R. J. Sternberg & R. K. Wagner (Eds.), *Practical intelligence: Nature and origins of competence in the everyday world* (pp. 338–360). New York: Cambridge University Press.

Olson, D. R. (1987). An introduction to understanding literacy. *Interchange, 18* (1/2), 1–8.

Olson, D. R., Torrance, N., & Hildyard, A. (1985). *Literacy, language, and learning: The nature and consequences of reading and writing*. New York: Cambridge University Press.

Palincsar, A. S. (1986). The role of dialogue in providing scaffolded instruction. *Educational Psychologist, 21,* 73–98.

Ramsey, P. D. K. (1983). Fresh perspectives on the school transformation-reproduction debate: A response to Anyon from the antipodes. *Curriculum Inquiry, 13,* 296–320.

Rivière, A. (1984). La psicologia de Vygotski [The psychology of Vygotsky.] *Infancia y Aprendizaje, 27–28* (3–4), 7–86.

Sarason, S. B. (1981). *The culture of the school and the problem of change* (2nd ed.). Boston: Allyn & Bacon.

Scribner, S., & Cole, M. (1981). *The psychology of literacy.* Cambridge, MA: Harvard University Press.

Stack, C. (1974). *All our kin: strategies for survival in a black community.* New York: Harper Colophon.

Steinberg, L., Blinde, P. L., & Chan, K. S. (1984). Dropping out among language minority youth. *Review of Educational Research, 54,* 113–132.

Taylor, D. (1983). *Family literacy: Young children learning to read and write.* Portsmouth, NH: Heinemann.

Taylor, D. (1989). Toward a unified theory of literacy learning and instructional practices. *Phi Delta Kappan, 71,* 184–193.

Taylor, D., & Dorsey-Gaines, C. (1988). *Growing up literate: Learning from inner-city families.* Portsmouth, NH: Heinemann.

Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context.* New York: Cambridge University Press.

Valsiner, J. (1988). *Developmental psychology in the Soviet Union.* Sussex, England: Harvester.

Vélez-Ibáñez, C. G. (1983a). *Bonds of mutual trust: The cultural systems of rotating credit associations among urban Mexicans and Chicanos.* New Brunswick, NJ: Rutgers University Press.

Vélez-Ibáñez, C. G. (1983b). *Rituals of marginality: Politics, process, and culture change in urban central Mexico, 1969–1974.* Berkeley: University of California Press.

Vélez-Ibáñez, C. G. (1988). Networks of exchange among Mexicans in the U.S. and Mexico: Local level mediating responses to national and international transformations. *Urban Anthropology, 17,* 27–51.

Vélez-Ibáñez, C., Greenberg, J., & Johnstone, B. (1984). The ethnic, economic, and educational structure of Tucson, Arizona: The limits of possibility for the Mexican Americans in 1982. *Proceedings of the Meetings of the Rocky Mountain Council on Latin American Studies* (pp. 154–164).

Vogt, L., Jordan, C., & Tharp, R. (1987). Explaining school failure, producing school success: Two cases. *Anthropology and Education Quarterly, 18,* 276–286.

Vygotsky, L. S. (1978). *Mind in society.* Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1987). Speech and thinking. In R. Rieber & A. Carton (Eds.), & N. Minick (Tr.), *The collected works of L. S. Vygotsky: Vol. 1* (pp. 39–285). New York: Plenum.

Wallace, C. (1989). Participatory approaches to literacy with bilingual adult learners. *Language Issues, 3* (1), 6–11.

Wallat, C., Green, J., Conlin, S., & Haramis, M. (1981). Issues related to action research in the classroom: Teacher and researcher as a team. In J. Green & C. Wallat (Eds.), *Ethnography and language in educational settings* (pp. 87–113). Norwood, NJ: Ablex.

Weber, R. M. (1989). Linguistic diversity and reading in American society. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research II* (pp. 97–119). White Plains, NY: Longman.

Wellman, B. (1985). Domestic work, paid work and net work. In S. Duck & D. Pearman (Eds.), *Understanding personal relationships: An interdisciplinary approach* (pp. 159–185). Beverly Hills, CA: Sage.

Wertsch, J. W. (1985). *Vygotsky and the social formation of mind.* Cambridge, MA: Harvard University Press.

Wilk, R. (Ed.). (1989). *The household economy.* San Francisco: Westview.

Wolf, E. (1966). *Peasants.* Englewood Cliffs, NJ: Prentice Hall.

13 World Knowledge, Inferences, and Questions

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An adequate understanding of literacy will never emerge without sophisticated theories of world knowledge, language comprehension, and reasoning. Unfortunately, however, researchers have encountered some serious bottlenecks in their investigations of these three areas. This chapter presents an overview of our program of research in cognitive psychology, a program that has directly confronted some of the troublesome bottlenecks in advancing a scientific understanding of world knowledge, language comprehension, and reasoning.

Consider first some of the problems involved with world knowledge. Individuals have a boundless inventory of concepts, facts, rules, experiences, and routines stored in memory, so there is a staggering volume of information that presumably must be examined. Indeed, some researchers are convinced that taking stock of world knowledge is a tedious enterprise to be circumvented at all costs. We believe that such an attitude is shortsighted. We are in a society that is facing a serious information-explosion problem. As the amount of available information increases, an individual's knowledge base becomes more specialized and/or more fragmented. Hirsch's bestseller *Cultural Literacy* (1987) identified some of the problems in a society of individuals who share very little common knowledge. In our research program, we have used "knowledge engineering" methods to extract individuals' knowledge about various topics. We have also investigated how this knowledge is organized and represented in the human mind.

Next consider some problems associated with language comprehension and reading. Most research on reading has focused on explicit language codes at various levels—letters, phonemes, syllables, lexical items, syntax, explicit propositions. The processing of explicit language codes is no doubt at the root of many literacy problems and can

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This research was funded by the Office of Naval Research (N00014-88-K-0110) through a contract awarded to Arthur C. Graesser.

explain individual differences in reading ability (Perfetti, 1987). Until recently, however, there has been comparatively little research on inference generation, summarization, and other comprehension activities that depend on world knowledge (Graesser & Bower, 1990). For example, when individuals read a novel, how and when do they generate inferences about characters' motives, characters' traits, the spatial setting, the causes of events in the plot, and the author's attitudes? In our research program, we have attempted to identify those classes of inferences that readers generate during comprehension and to specify how these inferences are organized in the text representation.

Now consider problems associated with reasoning. There once was a widespread belief that the foundation of human reasoning was independent of the knowledge domain under consideration. That is, a literate individual could apply logic (i.e., rules of valid reasoning, propositional calculus, truth tables) to any knowledge base. More recently, researchers have become convinced that a more prevalent and natural form of reasoning is "domain-specific" and shaped by conceptualizations of everyday experience (Gick & Holyoak, 1983; Johnson-Laird, 1983). The possibility that reasoning heuristics in medicine, history, engineering, and mathematics may differ in important ways implies that theories of reasoning need to be integrated with world knowledge. Our own research program has examined a foundation for reasoning that has previously received very little attention, namely that of question asking and question answering. Patterns of coherent reasoning are often governed by implicit or explicit questions that elicit answers with varying degrees of specificity. We have developed a model (called QUEST) that specifies the knowledge and cognitive processes which underlie question answering.

Some Assumptions that Underlie Our Methods and Theoretical Approach

The fields of cognitive psychology and cognitive science have furnished our methods and theoretical framework for investigating world knowledge, inference generation, and question answering.

Cognitive psychologists embrace traditional empirical methods in experimental psychology. For example, in a typical psychology experiment, individuals read text segments and are later tested on the text material. The investigator often manipulates the instructions to the readers so that the readers comprehend the material for different purposes. Reading times and test scores are measured and compared across different conditions. The patterns of reading times and test scores are compared with the predicted patterns of data that would be generated by alternative theories. Eventually researchers converge on one or a small set of theories that have a close fit to the patterns of behavioral measures.

The field of cognitive science is much younger (only fifteen years old) and has an interdisciplinary perspective. Cognitive science embraces the methods and theoretical developments from such diverse fields as psychology, linguistics, philosophy, and artificial intelligence. Using various computer models, cognitive scientists analyze how knowledge is represented and organized. An adequate model can simulate cognitive mechanisms in a computer program. For example, we have developed a computer model (called QUEST) that simulates human question answering for many types of question categories (e.g., why, how, when, where, what if).

Twenty years ago cognitive psychologists had contributed very little to our understanding of world knowledge, inference generation, and question answering. Indeed, Graesser himself was frequently discouraged from investigating these phenomena because they were open-ended, imprecise, or not well-grounded in established methodologies. Studying world knowledge was akin to studying quicksand; the researcher could easily sink in the bottomless pit of knowledge, with no solid foundation and with little hope of clearing up an intrinsically muddy enterprise. Studying inference generation was akin to studying hallucinations; only a bongo drum science would attempt to study a cognitive phenomenon that was not closely tied to the stimulus. The study of question answering was essentially regarded as narrow and irrelevant to mainstream cognitive theories. For some rather arbitrary reasons, cognitive psychology considered the search for information in short-term memory a fundamental problem to solve, whereas the process of answering questions was considered a narrow problem. Fortunately, the three of us never listened to the wise mentors in cognitive psychology who advised us to avoid the taboo problems of world knowledge, inference generation, and question answering. We believed that these problems were much too important to ignore.

A rigorous analysis of verbal protocols appeared to be the missing key to investigating world knowledge, inference generation, and question answering. We therefore frequently collected verbal protocols from individuals when they comprehended material and performed tasks. The analysis of verbal protocols has become a more popular methodology during the last decade (Ericsson & Simon, 1984; Graesser &

Clark, 1985; VanLehn, 1989; Olson, Duffy, & Mack, 1984), in spite of the criticism that it has received in some circles (Nisbett & Wilson, 1977). The hallmark of our research program was to perform systematic, rigorous, and detailed analyses of verbal protocols in order to induce and to test theories of world knowledge, inference generation, and question answering.

World Knowledge

Our research on world knowledge rests on three central claims. The first is that researchers need to extract world knowledge from humans empirically by using various forms of "knowledge engineering" methods. Stated more simply, we need to pick people's brains systematically and map out their knowledge structures. We need to perfect our knowledge engineering methods and apply these methods to a wide range of topics. Otherwise, the field will lack the analytical power to generate detailed, distinctive models that specify how world knowledge interacts with other components of cognition. This section discusses some knowledge engineering methods that have been used in our research program.

The second claim is that world knowledge must be represented, structured, and organized in a systematic format that conforms to a theory of knowledge representation (Allen, 1987; Anderson, 1983; Schank & Abelson, 1977; Winston, 1984). Ideally, these representations would be systematic to the extent that a computer could access the knowledge, operate on the knowledge, and produce output that mimics that of humans. A theory of knowledge representation specifies the basic idea units, the primitive elements in idea units, the relations that connect the idea units, and the foundations for packaging sets of idea units.

The third claim is that world knowledge structures must be tested both empirically and computationally (Graesser & Clark, 1985; Reiser & Black, 1982). Empirical tests involve the use of measures that are respected by behavioral scientists (e.g., rating scales, response times, reading times, memory scores). A world knowledge structure passes the computational test if it is gracefully integrated with cognitive procedures that operate on it. For example, a knowledge structure is entered as a data base in a computer system. The structure is valid if it can be accessed by several programs that perform various tasks (e.g., inference generation, summarization, question answering).

Methods of Testing Knowledge Structures

In order to illustrate different methods of testing models of knowledge structures, consider the concept of *kitchen*. It is possible to contrast the generic concept of kitchen with a set of specific knowledge structures associated with particular kitchens. The present example focuses on the generic kitchen. The following types of information would be stored under *kitchen*: the spatial layout of a typical kitchen, the furniture, the appliances, the objects, the people who use kitchens, the properties of entities, the goals and beliefs of people who use kitchens, the routines with action sequences, and typical events that go wrong (e.g., burning the eggs). The following methods may be used to extract the *kitchen* knowledge empirically.

Free Generation

With this method, the subject simply lists information that comes to mind about *kitchen*. Free generation has been applied to scripted activities (Bower, Black, & Turner, 1979; Graesser, 1978; Graesser & Nakamura, 1982), person stereotypes (Cantor, Mischel, & Schwartz, 1982; Woll & Graesser, 1982), spatial regions (Tversky & Hemenway, 1983), and a variety of other concepts (Graesser & Clark, 1985). The information extracted by the free-generation task merely skims the surface of the knowledge that individuals have about a concept.

Graesser and Clark (1985) collected free-generation protocols for 128 generic concepts that spanned many different knowledge domains: people, animals, objects, artifacts, locations, scripts, actions, events, properties, and abstract concepts. Free-generation protocols were collected from eight college students per concept. An average college student generated approximately ten facts per concept. An average concept had approximately twenty "common facts," which were generated by two or more subjects. A fact consisted of a proposition referring to a state (a kitchen has a sink, the sink is near a counter), an action (person cooks food), a goal (person wants food), an event (a flame occurs), or a style specification (the person cooks *quickly*).

The free-generation task elicits unsophisticated knowledge that is regarded as true by most individuals. Graesser, Hopkinson, Lewis, and Bruflodt (1984) probed college students on their knowledge of cancer, economics, and growing flowers. Only 5 percent of the generated facts referred to sophisticated knowledge, that is, a rule, a relationship between two variables, or a formula; most facts were unsophisticated statements involving a classification (cancer is a disease), a value on a variable (thousands of people have cancer), or an event (cancer patients die). Similarly, using a free-generation method failed to expose computer users' misconceptions about computers (Graesser & Murray, 1989).

Free Generation Plus Question Answering

In the first phase, subjects provide free-generation protocols from which common facts are extracted. In the next phase, subjects are probed with questions that elicit additional information about each common fact. For example, in Graesser and Clark's (1985) analysis of the 128 familiar concepts, subjects in the question-answering phase answered a why-question and a how-question about each common fact from the free-generation protocols. When common facts were extracted from both the free-generation and question-answering protocols (with eight subjects per concept in each phase), the mean number of facts per concept was 166. Therefore, the question-answering task exposed eight times the volume of information as the free-generation task.

One obvious challenge in using the question-asking method is to identify the question categories that are appropriate for particular types of knowledge. Graesser and Franklin's (1990) model of question answering (QUEST) provides some foundation for judiciously selecting questions that elicit a large volume of useful information.

Probing Subjects While They Perform Tasks

"Think-aloud" protocols elicited during problem solving, writing, learning a computer system, and other cognitive activities have been very popular for studying knowledge production (Ericsson & Simon, 1984; Graesser & Murray, 1989; Hayes & Flower, 1980; VanLehn, 1989; Olson, Duffy, & Mack, 1984). Think-aloud protocols provide a running record of the subject's thoughts and feelings as they occur during a task. Researchers have identified those conditions in which the protocols furnish a valid record of cognitive activities (Ericsson & Simon, 1984; Olson et al., 1984) versus those conditions that elicit invalid protocols.

We have developed a method that collects question-answering protocols during a task. In studies of text comprehension (Graesser, 1981; Graesser & Clark, 1985; Millis, Morgan, & Graesser, 1990), the subjects were probed with why, how, and what-happened-next questions as they incrementally comprehended each sentence in the text. These protocols elicited inferences generated during normal comprehension, as opposed to being elicited exclusively from the question-answering task.

Graesser and Murray (1989) used a question-answering task to probe college students while they were learning a new computer system. The students were systematically probed by an experimenter who asked three questions under specific conditions. Whenever the student performed an action for the first time, the student was asked *Why did you perform that action?* Whenever a computer message or prompt appeared on the computer screen for the first time, the student was asked *What does that message/prompt mean?* Whenever the student said nothing for a span of ten seconds, the student was asked *What are you thinking about now?* Graesser and Murray found that these questions elicited a large volume of the students' knowledge about the system, including erroneous facts and misconceptions. They reported that approximately half of the students' error-ridden knowledge could be inferred from the subjects' overt actions, whereas the other half of the error-ridden knowledge was elicited only by the question-answering task.

In using probes, it is important to judiciously select the set of tasks and problems for the subjects to work on. When the task is easy and routine, there is the danger of the subject's knowledge being so overlearned and automatized that it is difficult to penetrate and "unpack" by conscious mechanisms. When the task is moderately difficult or very difficult, the subject periodically pauses to think about the problem and to plan strategies, particularly when barriers are encountered; the contents of consciousness are frequently valid renditions of cognitive activities at these points.

Other Methods

Another method for eliciting knowledge is called exemplar generation. Subjects simply generate as many members of a category as they can think of (e.g., types of fruit, types of animals). Exemplar generation has been applied to natural categories (Graesser & Mandler, 1978) and to novel ad hoc categories such as "things to sell at a garage sale" (Barsalou, 1983). Exemplar generation can also be used to elicit typical plans and problems that a person encounters (e.g., generating the typical problems that a manager has during work).

Another method involves contrast elaboration. The subject is asked to list the similarities and differences between two concepts (Eymard, 1989). Alternatively, the subject is given three concepts, with instructions to identify which two concepts are most similar and are different from the third; the subject is also asked to justify these decisions by describing how the concepts are similar or different (Neimeyer, 1985).

Knowledge Representation and Organization

As argued earlier, it is important to understand world knowledge structures in relationship to a theory of knowledge representation. The theoretical roots of our representational system include theories of propositions in psychology (Anderson, 1983; Kintsch, 1974; Norman & Rumelhart, 1975), conceptual dependency theory in artificial intelligence (Allen, 1987; Lehnert, 1978; Schank & Abelson, 1977), theories of rhetorical predicates in computational linguistics and discourse processing (Dahlgren, 1988; Meyer, 1985), and causal network theories in psychology (Black & Bower, 1980; Trabasso & van den Broek, 1985). In our representational system, each knowledge structure is represented as a conceptual graph structure. A conceptual graph structure consists of a set of "statement nodes" that are connected by "arcs."

A statement node contains a predicate (e.g., verb, adjective) and one or more arguments (e.g., noun, embedded proposition) that occupy thematic roles (e.g., agent, object, recipient, time, location). For example, the proposition *the father fried the bacon* has *fried* as a predicate, *father* as an agent argument, and *bacon* as an object argument. A statement is unlike a proposition or idea unit in two important ways. First, some statement nodes contain more than one proposition, such that one proposition is embedded in another proposition. In the single statement node, *the father believed that bacon is healthy*, the embedded proposition is "bacon is healthy," whereas the main proposition is "the father believed ⟨embedded proposition⟩." Second, each statement node is assigned to a node category, such as goal, action, state, event, or style. A goal refers to an event or state that an agent desires. An action refers to a goal that is achieved by virtue of an agent executing a plan. A state is an ongoing characteristic that remains unchanged throughout the course of some time frame. An event is a change in state within some time frame. A style specification conveys the speed, intensity, force, or qualitative manner in which an event or action occurs. Listed here are some example statement nodes and how they would be categorized:

A kitchen has a sink. *(state)*
The sink overflowed with water. *(event)*
The father wanted the sink fixed. *(goal)*
A plumber fixed the sink. *(action)*
The sink was fixed quickly. *(style)*

There may be other statement node categories (e.g., process, rule), but these five categories have been satisfactory in most analyses that we have performed.

The nodes in a structure are interrelated by various categories of directed arcs. Each arc category has semantic and conceptual constraints that prevent the researcher from arbitrarily imposing structure on the knowledge. Figure 1 illustrates these constraints in the context of four classes of knowledge structures. A complete representational system would have dozens of arc categories, with particular classes of knowledge structures emphasizing different arc categories. Some arcs connect statement nodes whereas others connect noun concepts, as illustrated.

The figure shows the structural configurations of four classes of knowledge structures: causal networks, goal/action hierarchies, taxonomic hierarchies, and spatial structures. We will only briefly describe these classes in this chapter. A more complete description of our representational system is in other publications (Graesser & Clark, 1985; Graesser & Franklin, 1990).

Causal Networks

Causal networks organize the events and states in physical, biological, and technological systems (Forbus, 1984; Brown, Burton, & de Kleer, 1982). Consider the water system in a kitchen. When water comes out of the faucet, there is an event chain that unfolds over time: water flows through the pipe, water flows through the faucet, water enters the sink, water goes down the drain, and so on. A number of states enables each event: a faucet exists, the faucet is above the sink, the pipe is connected to the faucet, and so on. These event and state nodes are connected by consequence (C) arcs. Each C-arc connects a source node (at the beginning of the arc) to an end node (at the head of the arc).

There are three constraints associated with C-arcs. First, C-arcs can directly connect event and state nodes, but not goal and action nodes. Second, when a source node is connected to an end node with a C-arc, the direction is not arbitrary with respect to time. The source node must have occurred or existed in time prior to the end node, e.g., water flowing through the pipe precedes the same water flowing through the faucet. Third, the source node plays some causal role in producing the end node (Trabasso & van den Broek, 1985). For example, if the source node were negated or removed from the system, then the end node would not occur.

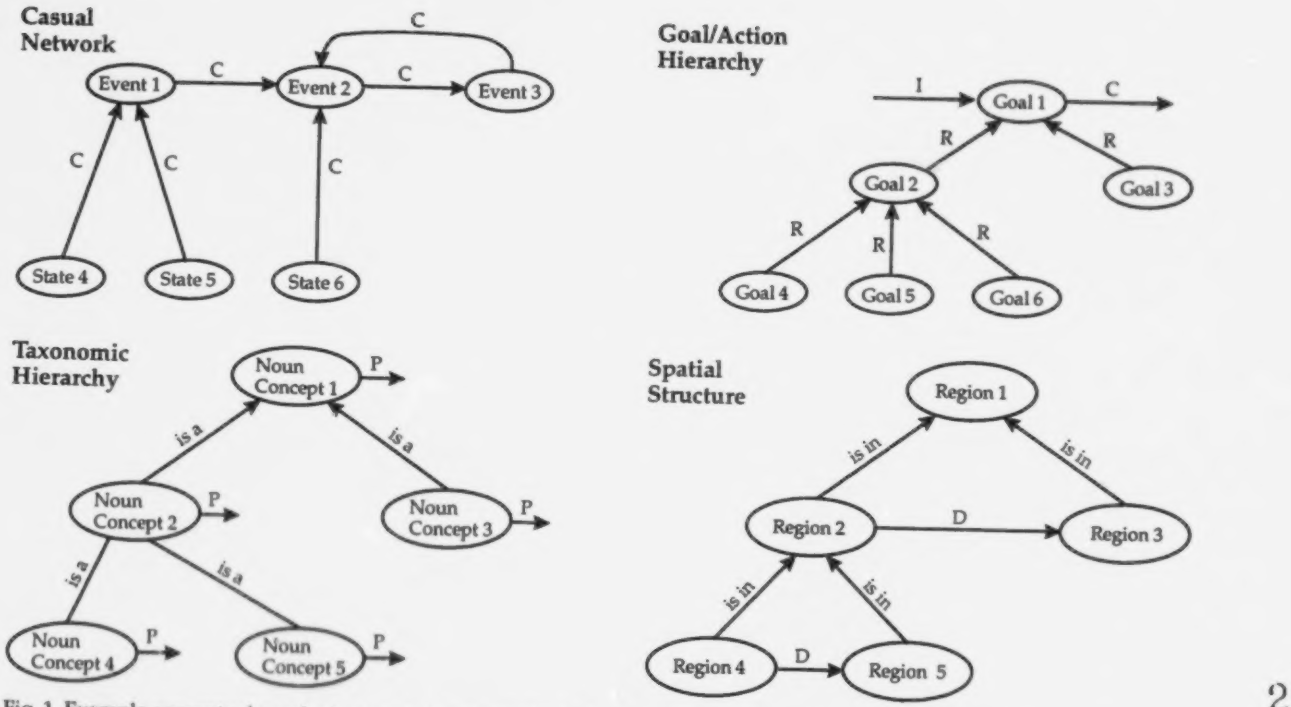
Casual Network
Event 1
Event 2
Event 3
State 4
State 5
State 6
C
Goal/Action Hierarchy
I
C
R
Goal 1
Goal 2
Goal 3
Goal 4
Goal 5
Goal 6
Taxonomic Hierarchy
Noun Concept 1
Noun Concept 2
Noun Concept 3
Noun Concept 4
Noun Concept 5
is a
P
Spatial Structure
Region 1
Region 2
Region 3
Region 4
Region 5
is in
D

Fig. 1. Example conceptual graph structures. Arc categories include consequence (C), reason (R), initiate (I), property (P), and direction (D).

Goal/Action Hierarchies

Goal hierarchies underlie the plans and action sequences executed by agents (Miller, Galanter, & Pribram, 1960; Newell & Simon, 1972; Wilensky, 1983). The goal hierarchies are triggered by states and events in the world. The superordinate goals are at the top of the hierarchy, whereas the subordinate goals and actions are at the bottom. The goal nodes are connected by reason arcs, as shown in Figure 1.

Consider the plan of making a ham sandwich in a kitchen. The most superordinate goal would be making the sandwich; midordinate goals would be putting the ham on one slice of bread and putting mustard on one slice of bread; low level subordinate goals would include walking to the refrigerator and getting the ham. The reason (R) arcs are not assigned to the structure arbitrarily. First, reason arcs connect goal nodes, but not events and states. Second, it makes sense to say "⟨subordinate goal⟩ in order to ⟨superordinate goal⟩" but not vice versa: "get the ham in order to put it on the bread," but not "put the ham on the bread in order to get the ham."

Taxonomic Hierarchies

Taxonomic hierarchies organize concepts and categories that are normally expressed as nouns (Smith & Medin, 1981). As shown in the figure, the nouns are related by an "is a" arc and property (P) arcs radiate from each node. An "is a" arc is a class inclusion relation, specifying that a given set of entities or categories is contained within a more abstract, inclusive category.

For example, consider the following concepts: food, meat, vegetables, ham, and fish. *Food* is the most abstract superordinate concept; *meat* and *vegetables* are intermediate; *ham* and *fish* are relatively subordinate. The properties associated with a concept are distinctive to that concept; the property distinguishes the concept in question from its sibling concepts (e.g., *fish* and *ham* are sibling nodes). For example, meat has the property "has grease," whereas vegetables and fruit typically do not have grease. According to a "sibling node constraint," a property can be assigned to concept A if and only if (1) that property is very typical of A and (2) the property distinguishes A from the sibling nodes of A. Once again, these taxonomic structures are organized according to systematic constraints rather than being structured haphazardly.

Spatial Structures

Spatial structures capture the spatial layout of regions, objects, and parts of objects (Kuipers, 1978; Stevens & Coupe, 1978; Tversky &

Hemenway, 1983). Figure 1 shows there is a "containment hierarchy" with regions nested within other regions via the "is in" arc. When considering the layout of a kitchen, the kitchen contains objects (refrigerator, sink), objects contain parts (freezer, dehydrator), and parts contain parts. There are also direction (D) arcs that specify the following relations between nodes: above/below, near/far, left of/right of, touch/not touch, and so on. There is some evidence for a sibling node constraint in spatial hierarchies, such that only sibling nodes can be linked to each other by direction arcs (Stevens & Coupe, 1978). For example, a spatial structure would explicitly specify that "the freezer is above the dehydrator" and "the faucet is above the sink," whereas the "freezer is above the sink" would not be directly stored.

Knowledge Packages

Knowledge packages are formed whenever a set of nodes forms a combination of bits of information. For example, adults have a *restaurant* script that houses causal networks, goal hierarchies, taxonomic hierarchies, and spatial structures. This script refers to a large set of nodes in the knowledge base. Our knowledge representation system has an arc called a referential pointer for specifying knowledge packages. The script has a referential pointer to each node in the set to which it refers. Whenever a knowledge package is accessed, most or all of the nodes connected to it by the referential pointer become activated in working memory.

Limitations to Models of Knowledge Structures

There are some important limitations to our approach to studying world knowledge. One limitation is that it is very tedious and time-consuming to study knowledge structures at the level of specificity that we have presented. We acknowledge this limitation, but we also believe that such an effort is needed for developing sophisticated theories of cognition and literacy. A second limitation is that our representational system may not be able to handle classes of knowledge other than causal networks, goal hierarchies, taxonomic structures, and spatial structures. A third limitation is that it is difficult for researchers to agree how to structure the knowledge if they have a limited understanding of the representational system.

We now turn to a discussion of our own research program, investigating interactions between world knowledge structures and two cognitive activities: inference generation during text comprehension and question answering.

Inference Generation during Text Comprehension

When adults read a novel, they presumably generate inferences about the spatial setting, the characters' traits, motives behind actions, and perhaps the author's attitude toward philosophical issues. Nevertheless, knowledge-based inferences have had a controversial status in the fields of cognitive psychology, artificial intelligence, and discourse processing. Theories in artificial intelligence assume that the reader generates a rich assortment of inferences (Dyer, 1983; Schank & Abelson, 1977). In contrast, most theories in cognitive psychology adopt a "minimalist" position. Advocates of this position assume that the reader refrains from generating knowledge-based inferences unless they are essential for constructing a coherent textbase that contains primarily explicit information (Kintsch & van Dijk, 1978; McKoon & Ratcliff, 1989). There also are theories that span the continuum between these two extremes (Beach & Brown, 1987; Graesser & Bower, 1990).

Part of the controversy stems from a trade-off between the use of naturalistic texts and the use of texts that permit experimental control over extraneous variables. Researchers often generate their own texts in an effort to control for these extraneous variables. The texts are typically short (two sentences), incoherent (approaching unrelated lists of sentences), and pointless. Alternatively, researchers investigate expository texts on topics that are unfamiliar to the reader. The role of world knowledge is minimized under these conditions, so there is little surprise that the minimalist position has received so much support.

There is widespread disagreement over the appropriate measures and experimental designs for testing whether a class of inferences is generated during comprehension. Researchers agree that it is important to probe the subject during the process of comprehending the text, rather than several minutes later which involves memory retrieval. Therefore, intrusions on recall tests, false alarms on recognition tests, and answers to questions on a comprehension test do not provide convincing evidence that an inference is comprehension-generated. A good example of an on-line measure is reading time for words and sentences. Subjects provide these times either in a self-paced procedure by pressing response buttons or in an eye-movement study that measures gaze durations for individual words. Words/sentences that elicit many inferences should take longer for adults to read than those that elicit few inferences. Other examples of on-line measures include lexical judgments, word naming, and recognition judgments on test words that are presented shortly after critical words in the text—when inferences are expected to occur (McKoon & Ratcliff, 1989; Potts, Keenan, & Golding, 1988). Researchers have debated the costs and benefits of each measure/method in considerable detail (Graesser & Bower, 1990).

Our research program has pursued a three-pronged approach to investigating inference generation during comprehension. First, we extract potential text inferences to devise a list of candidate inferences and the world knowledge structures necessary for generating those inferences. Second, we examine alternative theories that offer predictions about which classes of inferences are comprehension-generated. Each theory predicts that a particular subset of the candidate inferences is generated during comprehension. Third, we collect behavioral measures in experimental tasks in order to test the theories. We believe that all three components—knowledge engineering, theory, and behavioral tests—are needed to converge on a satisfactory model of inference generation. The studies described here illustrate how the three-pronged approach has been applied to expository texts on science topics and to short narrative passages.

Expository Texts on Science Topics

Millis, Morgan, and Graesser (1990) examined short texts that describe causal chains in physical, biological, and technological systems. Each text had five events and was based on articles in the *American Academic Encyclopedia*. This example text is on nuclear power.

Event 1: Atoms are split.
Event 2: Heat energy is released.
Event 3: Water in the surrounding tank is heated.
Event 4: Steam drives a series of turbines.
Event 5: The turbines produce electricity.

There were twenty-four texts equally divided among physical systems (e.g., rainfall, earthquake), biological systems (mitosis, photosynthesis), and technological systems (television, nuclear power). These texts were assumed to be organized in the form of a causal network.

Millis et al. (1990) used knowledge engineering methods in order to extract inferences associated with the texts. A group of college students answered why, how, and what-happened-next (WHN) questions after each event was interpreted. More specifically, the text title was presented and the subjects answered a WHN question. Then the first sentence was presented and the subjects answered all three questions about the event: "Why are atoms split?" "How are atoms split?" "What happens next?" Then the second sentence was read and the three questions were asked, and so on. Approximately half of the answers to these questions referred to explicit text statements, whereas the other half were knowledge-based inferences. A subset of the inferences was presumably comprehension-generated, whereas the other inferences were elicited only because these questions were asked.

An "answer distribution," a list of inferences elicited by the questions, was prepared for each event in the text. A proportion score is associated with each inference, signifying the proportion of subjects who generated the particular inference in the Q/A task. Separate proportion scores are computed for the three question categories, because these questions elicit different types of information. When an event is probed with a why-question, the answers tap causal antecedents of the event (via backward C-arcs, see Fig. 1). Answers to WHN-questions tap causal consequences (via forward C-arcs). Answers to how-questions tap causal antecedents, concurrent events, and style specifications.

A "new answer distribution" computes the likelihood that an inference is generated for the first time in a passage. Suppose that in the context of the nuclear power text, there is an inference *an explosion occurs*. Suppose further that this inference is elicited by 0 percent of the subjects who answer why-questions for Event 1, 20 percent of the subjects who answer why-questions for Event 2, and 80 percent of the subjects who answer why-questions for Event 3. In the new answer distribution, the proportion score for the inference would be (0.8 - 0.2) = 0.6 for Event 3.

Each text event was also scaled on a number of dimensions derived from the new answer distributions. The "new inference volume score" for event N was the sum of the proportion scores for all inferences elicited by event N. Separate new inference volume scores were computed for causal antecedents, expectations about subsequent events, and elaborations (i.e., concurrent events and style specifications). A "confirmed expectation score" assessed the likelihood that text event N matched an expectation generated from prior events. As one might expect, Millis et al. (1990) observed that the new inference volume scores decreased and the confirmed expectation scores increased as a function of the serial position of the five events in the text. Text events were also scaled on a number of other variables (e.g., number of syllables, word frequency of content words, serial position) that were not directly relevant to theories of inference generation.

A separate group of college students provided self-paced reading times for each event in the twenty-four texts. Millis, Morgan, and Graesser (1990) used multiple regression techniques in order to examine whether these reading times could be predicted by the scaled variables discussed above. Each student furnished 120 reading times, so it was possible to assess several predictor variables in a multiple regression analysis for each subject. Given that a multiple regression analysis was performed on each subject separately, it was possible to assess whether any reported effects could be generalized to other subjects (i.e., college students) as well as to other texts (i.e., scientific event chains).

So far we have specified the knowledge engineering method and the behavioral measure in the three-pronged approach. What about theory? The data from Millis et al. could be used to test several alternative theories and hypotheses, but only two theories are addressed here: the minimal coherence theory (Kintsch & van Dijk, 1978; Kintsch, 1988; McKoon & Ratcliff, 1989) and the expectation-substantiation theory (DeJong, 1979; Dyer, 1983; Schank & Abelson, 1977). According to the minimal coherence theory, the reader generates those inferences that are needed to establish text coherence (e.g., causal antecedents) but not inferences that involve elaborations and expectations. Causal antecedents often need to be generated in order to connect an incoming event N with the context of previous passages (events 1 through N−1); elaborations and expectations are not needed to establish conceptual connectivity between event N and the prior text information. The expectation-substantiation theory assumes that in addition to the causal antecedents that establish coherence, the reader generates expectations about subsequent occurrences in the text. One advantage to generating expectations is the savings in reading time that the reader enjoys whenever an incoming event matches a prior expectation.

The Millis, Morgan, and Graesser (1990) study confirmed the predictions of the expectation-substantiation theory rather than those of the minimal coherence theory. Events that matched a prior expectation were read 501 milliseconds faster than those that failed to match any prior expectation. It should be noted that the multiple regression analyses partialled out contributions from a number of obvious extraneous variables (e.g., number of syllables, word frequency, serial position of events).

Millis (1990) collected lexical decision latencies on inference words in the context of the same twenty-four texts. After the subject read a sentence, he or she received a test string that either formed a word (e.g., *explosion*) or a nonword (e.g., *elpoxions*). The subject quickly indicated whether the text string formed a word by pressing one of two buttons, and the lexical decision latency was recorded. The words in the sentence were presented in an RSVP (rapid serial visual presentation) format, such that each word was presented for 500 milliseconds in the normal layout of the text (see Kintsch, 1988; McKoon & Ratcliff, 1989). The test word was surrounded by asterisks (***explosion***) and was presented either 500 or 1500 milliseconds after the final word in the sentence; as it turns out, this delay in stimulus onset asynchrony (SOA) had no significant effect on the decision latencies. In addition, context was manipulated by presenting each test inference in the original text and in an unrelated text. Of course, a particular test word was presented only once to any given subject; a given test word was in the original text for half of the subjects and in an unrelated text for the other half.

The important test words were verbs or nouns extracted from the inferences in Millis, Morgan, and Graesser's (1990) answer distributions. For example, if an inference was *an explosion occurred*, the test word was *explosion*. When the test words were selected, Millis (1990) made sure that the inference was generated by the target event and not by any previous events in the text. Millis also collected free-association data to ensure that the test inference was not triggered by any of the words in events prior to the target event. The critical dependent measure was the "activation score" for each inference, as reported by Kintsch (1988). This was measured as a difference in lexical decision latency between the two context conditions: latency (unrelated context) minus latency (original context). If a particular category of inference is comprehension-generated, then the activation score should be significantly positive.

The outcome of the lexical decision study, however, was incompatible with the outcome of the reading time study. Millis (1990) found support for the minimal coherence theory, rather than for the expectation-substantiation theory. The mean activation scores were significantly positive for antecedent inferences (29 milliseconds) but not for expectation inferences (−12 milliseconds). One explanation of this discrepancy is that the methods imposed by the lexical decision study frustrated the readers' attempts to become absorbed in the text. Perhaps the RSVP task prevented a natural consolidation of the material, whereas the lexical decision task presented constant interruptions. Once again, the trade-off between naturalistic observation and experimental control rears its ugly head. Additional research is clearly needed to test the theories further, to resolve inconsistencies in the results, and to sort out the problems with the various behavioral tasks.

Short Narrative Texts

Several studies have been conducted on four short stories of approximately 150 words. For example, one story was about some heroes rescuing females from a dragon. Graesser (1981) extracted knowledge-based inferences by using the same knowledge engineering method that was just discussed for expository texts. That is, subjects answered why, how, and WHN questions as they incrementally interpreted each sentence. Graesser (1981) prepared answer distributions for each text statement and identified the point in the text where each inference was first generated. In addition, Graesser and Clark (1985) mapped out the generic knowledge structures (GKSs) associated with the content words in the four stories. They used the free-generation plus question-answer method (as discussed in the previous section) to extract the content of 128 GKSs that were relevant to the stories. Therefore, Graesser and Clark had a systematic inventory of both the text inferences and the world knowledge structures that generated those inferences.

Graesser and Clark (1985) reported that most of the inferences (80 percent) matched a statement node in at least one GKS associated with the text. In fact, the majority of the inferences produced by a text statement matched a node in one of the content words within the text statement. For example, suppose that the text statement *the heroes fought the dragon* elicited the inference "the dragon breathed fire." This inference would probably be passed down from the general knowledge structure for *dragon* but not from the GKSs for *hero* and *fight*. The inference "the heroes hurt the dragon" would probably be stored under *hero* and *fight* but not *dragon*. It is therefore possible to scale each inference on the number of information sources that generated the inference. It should be noted that some inferences failed to match any node in the activated GKSs. References to the time, location, and style of executing actions often failed to match a node in any GKS because that information is unique to the particular story context. This points to the important issue of whether world knowledge can be used to comprehend unique instances that deviate from that knowledge.

Long, Golding, Graesser, and Clark (1990) collected lexical decision latencies for inference words associated with the four stories. College students read the stories, one sentence at a time, and self-paced reading times were recorded. The following phases occurred after a student pressed a response button to register the sentence was read: (a) there was a 500 millisecond pause, (b) four asterisks appeared in the center of the computer screen for 250 milliseconds, (c) there was a pause of

250 milliseconds, (d) a test string appeared in the center of the screen, and (e) the reader decided as quickly as possible whether the test string was a word or a nonword by pressing one of two buttons. The lexical decision latencies were recorded and served as the behavioral measure in this study. If it were truly comprehension-generated, a test word would have a short latency.

Long et al. (1990) tested two hypotheses about inference generation. The first hypothesis addressed the goal inferences that are constructed when intentional actions are performed by characters in stories. Graesser and Clark's (1985) theory of comprehension predicts that superordinate goal inferences have a higher likelihood of being comprehension-generated than are subordinate goal inferences. For example, the text action *the dragon kidnapped the daughters* elicited the following two goal inferences:

> The dragon (wanted to) *kill* the daughters. [superordinate goal]
>
> The dragon *carried* off the daughters. [subordinate goal/action]

Graesser and Clark would predict that the lexical decision latency for *kill* would be faster than the latency for *carried*. When characters perform actions, they are motivated by superordinate goals; these goals specify why an intentional action is performed. Understanding why actions and events in the plot occur is central to the comprehension of narrative. Why-questions provide an important conceptual foundation for text coherence in story plots. In contrast, subordinate goals are elaborative inferences that flesh out the plan and style of executing the intentional action (i.e., how an action is performed). Subordinate goals are rarely needed for establishing story coherence (Graesser & Clark, 1985).

The lexical decision latencies confirmed the hypothesis about goal inferences. Multiple regression analyses were conducted to test whether the lexical decision latencies could be predicted by the superordinate/subordinate distinction and by a host of extraneous variables (e.g., number of letters, word frequency, word concreteness, associative strength between the test word and the words in the target sentence). Latencies were 80 milliseconds faster for superordinate inference words than for the subordinate words.

A second hypothesis that Long et al. (1990) tested involved event versus state inferences. Graesser and Clark (1985) predict that event inferences are comprehension-generated more often than are state inferences. Given that story plots are organized around events and actions that unfold chronologically, the reader should focus on changes that occur in a story, rather than on the constancies. For example, when the statement *the daughters cried* is read, an event inference is "the daughters became frightened," whereas a state inference is "the daughters were weak." The test word *fright* should have a shorter latency than the test word *weak*. Indeed, the data confirmed this prediction. Multiple regression analyses indicated that the lexical decision latencies were 57 milliseconds faster for events than for states.

The studies in this section have illustrated how the three-pronged approach can be applied to the problem of inference generation during text comprehension. The approach clearly needs to be applied to a broader diversity of texts and classes of inferences before the approach can be evaluated; however, the initial set of findings is quite encouraging. We should emphasize that our methods can be used to study naturalistic text under normal reading conditions. In the future, we plan on collecting eye-movement data from readers as they read published short stories, although there is some debate as to what eye movements actually represent. There is some evidence that inference processes are particularly prevalent when the final words in sentences and clauses are read (Graesser, Haberlandt, & Koizumi, 1987; Just & Carpenter, 1987; Haberlandt & Graesser, 1985). The collection of eye movements and gaze durations is much less disruptive than is the lexical decision task.

Questions

Questions are a very important part of knowledge acquisition, communication, and social interaction. In spite of this, question asking and question answering have rarely been direct objects of inquiry in cognitive psychology. Truth verification decisions and latencies have typically been collected from subjects who are presented test statements, such as true/false questions (*A robin is a bird, Bob is taller than Chris*), or test questions, such as yes/no questions (*Is a robin a bird? Is Bob taller than Chris?*) (Reder, 1987; Singer, 1990). Cognitive research has only recently begun to examine open-class (such as why, how, what if, when, and where) questions that elicit elaborate verbal descriptions as answers (Graesser & Black, 1985; Shanon, 1983; Trabasso, van den Broek, & Liu, 1988). The fields of artificial intelligence and computational linguistics have offered more insights about questioning than has the field of cognitive psychology (Allen, 1987; Dahlgren, 1988; Dyer, 1983; Lehnert, 1978; Lehnert, Dyer, Johnson, Young, & Harley, 1983; McKeown, 1985; Woods, 1977). Researchers in the field of education have documented the categories and frequency of questions in the classroom (Dillon, 1988) and have investigated the impact of adjunct questions on text comprehension and memory (Anderson & Biddle, 1975; Andre, 1987), but have not focused on the world knowledge and computational mechanisms that underlie questioning.

QUEST: A Model of Question Answering

We have developed a model called QUEST that accounts for the answers adults produce when they answer questions (Graesser & Franklin, 1990). QUEST handles many question categories, but the major focus has been on open-class ones (e.g., why, how, what if). Question-answering protocols have been analyzed in the context of short narrative passages, common procedures (e.g., washing a car), expository passages on scientific mechanisms, generic knowledge structures, telephone surveys, televised interviews, and business transactions. QUEST has held up quite impressively in these contexts (Golding, Graesser, & Millis, 1990; Graesser & Clark, 1985; Graesser, Hemphill, & Brainerd, 1989; Graesser & Murachver, 1985; Graesser, Roberts, & Hackett-Renner, 1990; Graesser, Robertson, & Anderson, 1981).

One important area that QUEST attempts to explain is the convergence problem. Given that a question typically accesses several information sources and that each information source has dozens of statement nodes, there are hundreds of nodes available in working memory as candidate answers. However, only a small subset of these nodes in the "node space" are good answers to the question. Convergence mechanisms are needed to narrow down the node space from hundreds of nodes to about ten good answers. For example, consider the question *Why did the heroes fight the dragon?* in the context of a short story. According to Graesser and Clark (1985), this passage structure has 125 statement nodes, and each generic knowledge structure (*hero, fight, dragon*) has 166 nodes that may serve as candidate answers; these structures collectively generate 623 total nodes. The convergence mechanism reduces the node space from 623 nodes to ten good answers.

QUEST has four major components. First, this model translates the question into a logical form and assigns it to one of several question categories. Second, QUEST identifies the information sources that are relevant to the question. The most important information sources are those generic knowledge structures that are associated with the content words in the question and any specific knowledge structures that are available (e.g., the textbase, a specific experience). Third, QUEST considers the pragmatic features of the communicative exchange, such as the goals and the common ground between speech participants. Fourth, convergence mechanisms compute the subset of nodes in the information sources that are relevant answers to a particular question.

The convergence mechanism has three important subcomponents. An "arc search procedure" restricts its search to particular paths of relational arcs, depending on the question category; nodes on legal paths are good answers while nodes on illegal paths are bad answers. Examples of arc search procedures will be discussed later. An "intersecting node identifier" gives preference to nodes that intersect (i.e., match, overlap) between knowledge structures, with preference values decreasing as nodes are more arcs removed from the queried node. Therefore, when the number of arcs is computed between the queried node and the answer node, this structural distance value is negatively correlated with answer quality. A "constraint satisfaction" subcomponent prunes out those nodes in an information source that are incompatible with the semantic/conceptual features of the statement being queried. For example, suppose there is a queried node Q and a candidate answer A. Node A will be pruned out if A is false, if A contradicts Q, if the time frame of A is incompatible with Q, or if A bears no causal relationship to Q.

It is beyond the scope of this article to specify all of the question-answering components in detail. Instead, we concentrate on the arc search procedures of QUEST. The question categories and arc search procedures are sensitive to the type of knowledge structure under consideration (see Fig. 1). Why, how, when, and what if questions are more appropriate for causal networks and goal hierarchies than for taxonomic hierarchies and spatial structures. For spatial structures, where questions are more natural than for causal networks and goal hierarchies. Associated with each question category is an arc search procedure that systematically samples nodes within an information source. The arcs that are traversed depend on the type of knowledge structure, as discussed below. In subsequent discussion, *entry node* is defined as that node in a knowledge structure that matches the queried statement; all searches start from the entry node in an information source.

Causal networks: Answers to why, how, enable, and when questions include causal antecedents to a queried event, whereas answers to what if questions include causal consequences. For example, consider the following three events in the context of nuclear power: (1) atoms are split, (2) heat energy is released, and (3) water is heated. If Event 2 is probed with a why, how, when, or enable question, then Event 1 is a legal answer but Event 3 is not; however, Event 3 is a legal answer to a what if question. When couched in terms of the conceptual graph structures (Fig. 1), causal antecedents radiate from the entry node by paths of backward C-arcs, and answers to what if questions pursue forward C-arcs. If Event 1 in Figure 1 is probed with a why question, the legal answers are nodes (states) 4 and 5, whereas nodes (events) 2 and 3 are the legal answers to a what if question.

Goal/plan hierarchy: Legal answers to why and what if questions are superordinate to the queried action (via forward R-arcs, see Fig. 1), whereas legal answers to how and enable questions are subordinate (via backward R-arcs). Consider the following hierarchy of goals/actions: (1) the boy drove to the store, (2) the boy bought a steak, and (3) the boy ate dinner. If Action 2 is probed with a why or what if question, then node (goal) 3 is a legal answer but node 1 is not; node 1 is a legal answer to a how or enable question whereas node 3 is illegal.

Taxonomic hierarchy: Typical questions associated with this type of structure are "What does X mean?" or "What is an X?" The appropriate arc search procedure is in a genus-differentiae frame: "X is a ⟨superordinate node via 'is a'⟩ that ⟨set of properties connected to X⟩." If the question "What is a bird?" is asked in the context of an animal taxonomy, then an appropriate answer is "a bird is an animal that has wings and can fly." Legal answers to "what are all of the properties of an X?" include the properties directly stored with X and all of the properties inherited from superordinate nodes. Legal answers to "what are examples of an X?" include all subordinate nodes (via the backward "is a" arc).

Spatial structures: "Where is X?" questions sample superordinate nodes (via forward "is in" arcs) and nodes that are directly connected to X via a directional arc. If the question "Where is Tennessee?" is asked in the context of the United States, legal answers include: in the southeast, in the United States, in North America, north of Mississippi, east of Arkansas, and so. "What is in X?" questions sample nodes via backward "is in" arcs, e.g., Memphis, Nashville, Knoxville.

The arc search procedures in these examples illustrate how convergence can be achieved by sampling nodes that lie on particular paths of arcs. The arc search procedure is a quite powerful means of cutting down the node space, especially when the node space is large. The convergence ratio (i.e., legal nodes to total nodes in structure) is less than 10 percent for the typical generic knowledge structure with 166 nodes. Once again, however, other convergence components can cut down the node space even further. Given a legal path of nodes that extends from an entry node, the answers become progressively poorer as the nodes are further from the entry node; there is an exponential decrease in answer quality as a function of distance (Graesser & Clark, 1985; Graesser, Hemphill, & Brainerd, 1989). Candidate nodes are pruned out when they are conceptually incompatible with the queried node.

Evidence for QUEST

Before we summarize some of the evidence for QUEST, we need to acknowledge two important methodological points. First, we never would have discovered the systematic mechanisms underlying QUEST without using knowledge engineering methods to map out world knowledge structures. At times we had to induce the arc search procedures by examining the world knowledge structures and observing paths of arcs between the queried node and answer node. Second, QUEST would never have evolved without theoretical progress in the areas of artificial intelligence and computational linguistics. The theories of knowledge representation and question answering in these fields were quite appreciated because there were no serious models of question answering in psychology.

One important test of QUEST is whether it can account for the answers that people produce when they answer questions in question-answering tasks. Suppose that a question is asked in the context of a particular world knowledge structure, W. A subset of the nodes in W consists of legal answers according to QUEST (the set of L answers) and another subset that is illegal (the set of I answers). Graesser and Murachver (1985) reported that 95 percent of college students' answers to questions are in subset L and 5 percent are in subset I. Of all the nodes in subset L, 20 percent end up being empirically generated by subjects, whereas less than 1 percent of the nodes in subset I are produced as answers. Graesser and Murachver's results covered seven types of questions that were asked in the context of short narrative texts: why, how, when, where, what enabled X, what are the consequences of X, and what is the significance of X.

Another test of QUEST consists of goodness-of-answer judgments. In this task, the subjects first read a passage and then provide goodness-of-answer judgments on several question/answer pairs. On each trial, a question first appears on a computer screen and self-paced reading times are collected from the subject. After a half-second pause, the answer appears on the screen and the subject indicates whether the answer is good or bad by pressing one of two keys. Decision latencies are recorded in addition to the subject's decisions. Several studies have reported that the goodness-of-answer decisions are robustly predicted by the arc search procedures, structural distance, and/or the constraint satisfaction components of convergence (Golding et al., 1990; Graesser, Hemphill, & Brainerd, 1989; Graesser, Lang, & Roberts, 1989; Murachver, Murray, & Graesser, 1985). Decision latencies are also predicted by the convergence mechanisms, but the latencies are not as systematic as the goodness-of-answer decisions.

Graesser, Roberts, and Hackett-Renner (1990) examined whether the arc search procedures of QUEST are valid in naturalist conversations and in other pragmatically meaningful environments. In one study, the pragmatic context consisted of a brief telephone survey in which a question was asked about a historical event (e.g., "How did the *Titanic* sink?"). In a second study, college students visited businesses in the guise of customers, asked clerks questions (e.g., "How does a person get a credit card?" in a bank), and tape-recorded answers. Study 3 was an analysis of questioning in televised interviews (e.g., MacNeil/Lehrer News Hour). QUEST could account for 83 percent of the answers, when averaging across the three studies, and for virtually all answers that referred to the topic being queried (e.g., the sinking of the *Titanic*, acquiring a credit card). The answers outside of the scope of QUEST were counter-questions, directives, requests, and expressive evaluations.

There are two serious limitations to QUEST, as it has been developed so far. First, QUEST does not explain the impact of the goals and common ground of the speech participants in complex conversational contexts. In order to understand these pragmatic mechanisms, we are currently analyzing student-tutor interactions while learning algebra. Second, QUEST does not explain the mechanisms of question asking and how these activities constrain the answers to a question. The quality of an answer improves to the extent that the answerer has some understanding of why the questioner asked the question (van der Meij, 1987). Although we have investigated the conceptual foundations of question generation per se (Graesser, Lang, & Horgan, 1988), the QUEST model has not integrated existing insights about the question-asking process.

In this article, we have presented a systematic approach to the study of world knowledge, inference generation, and question answering. Until recently, these phenomena have not received top billing in cognitive research and in the study of literacy. We hope that our research program will inspire some scientists and scholars to achieve some noticeable progress during the next decade.

References

Allen, J. (1987). *Natural language understanding.* Menlo Park, CA: Benjamin/Cummings.

Anderson, J. R. (1983). *The architecture of cognition.* Cambridge, MA: Harvard University Press.

Anderson, R. C., & Biddle, W. B. (1975). On asking people questions about what they are reading. *The Psychology of Learning and Motivation: Advances in Research and Theory, 9,* 89–132.

Andre, T. (1987). Questions and learning from reading. *Questioning Exchange, 1,* 47–86.

Barsalou, L. W. (1983). Ad hoc categories. *Memory and Cognition, 11,* 211–227.

Beach, R., & Brown, R. (1987). Discourse comprehension and literary inference: Toward a theoretical model. In R. J. Tierney, P. L. Anders, & J. N. Mitchell (Eds.), *Understanding readers' understanding* (pp. 147–174). Hillsdale, NJ: Lawrence Erlbaum.

Black, J. B., & Bower, G. H. (1980). Story understanding as problem solving. *Poetics, 9,* 223–250.

Bower, G. H., Black, J. B., & Turner, T. J. (1979). Scripts in memory for text. *Cognitive Psychology, 11,* 177–220.

Brown, J. S., Burton, R. R., & de Kleer, J. (1982). Pedagogical, natural language, and knowledge engineering techniques in SOPHIE I, II, and III. In D. Sleeman & J. S. Brown (Eds.), *Intelligent tutoring systems* (pp. 168–189). New York: Academic Press.

Cantor, N., Mischel, W., & Schwartz, J. (1982). A prototype analysis of psychological situations. *Cognitive Psychology, 14,* 45–77.

Dahlgren, K. (1988). *Naive semantics for natural language understanding.* Boston: Kluwer Academic.

DeJong, G. (1979). Prediction and substantiation: A new approach to natural language processing. *Cognitive Science, 3,* 251–273.

Dillon, J. T. (1988). *Questioning and teaching: A manual of practice.* New York: Teachers College Press.

Dyer, M. G. (1983). *In-depth understanding: A computer model of integrated processing for narrative comprehension.* Cambridge, MA: MIT Press.

Ericsson, K. A., & Simon, H. A. (1984). *Protocol analysis: Verbal reports as data.* Cambridge, MA: MIT Press.

Eymard, L. A. (1989). *The relationship between device knowledge and mental models in children.* Unpublished master's thesis, Memphis State University.

Forbus, K. D. (1984). Qualitative process theory. *Artificial Intelligence, 24,* 85–168.

Gick, M. L., & Holyoak, K. J. (1983). Schema induction and analogical transfer. *Cognitive Psychology, 15,* 1–38.

Golding, J. M., Graesser, A. C., & Millis, K. K. (1990). What makes a good answer to a question?: Testing a psychological model of question answering in the context of narrative text. *Discourse Processes, 13,* 305–325.

Graesser, A. C. (1978). How to catch a fish: The memory and representation of common procedures. *Discourse Processes, 1,* 72–89.

Graesser, A. C. (1981). *Prose comprehension beyond the word.* New York: Springer-Verlag.

Graesser, A. C., & Black, J. B. (Eds.). (1985). *The psychology of questions.* Hillsdale, NJ: Lawrence Erlbaum.

Graesser, A. C., & Bower, G. H. (Eds.). (1990). *The psychology of learning and motivation: Advances in research and theory: Inferences and text comprehension, 25.*

Graesser, A. C., & Clark, L. F. (1985). *Structures and procedures of implicit knowledge.* Norwood, NJ: Ablex.

Graesser, A. C., & Franklin, S. P. (1990). QUEST: A cognitive model of question answering. *Discourse Processes, 13,* 279–303.

Graesser, A. C., Haberlandt, K., & Koizumi, D. (1987). How is reading time influenced by knowledge-based inferences and world knowledge? In B. K. Britton & S. M. Glynn (Eds.), *Executive control processes in reading* (pp. 217–251). Hillsdale, NJ: Lawrence Erlbaum.

Graesser, A. C., Hemphill, D., & Brainerd, L. E. (1989). Question answering in the context of causal mechanisms. In *Programs of the Eleventh Annual Conference of the Cognitive Science Society* (pp. 621–626). Hillsdale, NJ: Lawrence Erlbaum.

Graesser, A. C., Hopkinson, P. L., Lewis, E. W., & Bruflodt, H. A. (1984). The impact of different information sources on idea generation: Writing off the top of our heads. *Written Communication, 1,* 341–364.

Graesser, A. C., Lang, K., & Horgan, D. (1988). A taxonomy for question generation. *Questioning Exchange, 2,* 25–38.

Graesser, A. C., Lang, K. L., & Roberts, R. M. (1989). Question answering in the context of stories. Unpublished manuscript, Memphis State University, Department of Psychology.

Graesser, A. C., & Mandler, G. (1978). Limited processing capacity constrains the storage of unrelated sets of words and retrieval from natural categories. *Journal of Experimental Psychology: Human Learning and Memory, 4,* 86–100.

Graesser, A. C., & Murachver, T. (1985). Symbolic procedures of question answering. In A. C. Graesser & J. B. Black (Eds.), *The psychology of questions* (pp. 91–124). Hillsdale, NJ: Lawrence Erlbaum.

Graesser, A. C., & Murray, K. (1989). An analysis of verbal protocols to explore the acquisition of a computer environment. In S. P. Robertson, W. Zachary, & J. B. Black (Eds.), *Cognition, computing, and interaction* (pp. 210–238). Norwood, NJ: Ablex.

Graesser, A. C., & Nakamura, G. V. (1982). The impact of a schema on comprehension and memory. *The Psychology of Learning and Motivation: Advances in Research and Theory, 16,* 59–109.

Graesser, A. C., Roberts, R. M., & Hackett-Renner, C. (1990). Question answering in the context of telephone surveys, business interactions, and interviews. *Discourse Processes, 13,* 327–348.

Graesser, A. C., Robertson, S. P., & Anderson, P. A. (1981). Incorporating inferences in narrative representations: A study of how and why. *Cognitive Psychology, 13,* 1–26.

Haberlandt, K., & Graesser, A. C. (1985). Component processes in text comprehension and some of their interactions. *Journal of Experimental Psychology: General, 114*, 357–374.

Hayes, J. R., & Flower, L. S. (1980). Identifying the organization of writing processes. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive processes in writing* (pp. 3–30). Hillsdale, NJ: Lawrence Erlbaum.

Hirsch, E. D. (1987). *Cultural literacy: What every American needs to know.* Boston: Houghton Mifflin.

Johnson-Laird, P. N. (1983). *Mental models.* Cambridge, MA: Harvard University Press.

Just, M. A., & Carpenter, P. A. (1987). *The psychology of reading and language comprehension.* Newton, MA: Bacon.

Kintsch, W. (1974). *The representation of meaning in memory.* Hillsdale, NJ: Lawrence Erlbaum.

Kintsch, W. (1988). The role of knowledge in discourse comprehension: A construction-integration model. *Psychological Review, 95*, 163–182.

Kintsch, W., & van Dijk, T. A. (1978). Toward a model of text comprehension and production. *Psychological Review, 85*, 363–394.

Kuipers, B. (1978). Modeling spatial knowledge. *Cognitive Science, 1*, 129–153.

Lehnert, W. G. (1978). *The process of question answering.* Hillsdale, NJ: Lawrence Erlbaum.

Lehnert, W. G., Dyer, M. G., Johnson, P. N., Young, C. J., & Harley, S. (1983). BORIS—An experiment in in-depth understanding of narratives. *Artificial Intelligence, 20*, 15–62.

Long, D. L., Golding, J. M., Graesser, A. C., & Clark, L. F. (1990). Goal, event, and state inferences: An investigation of inference generation during story comprehension. *The Psychology of Learning and Motivation: Advances in Research and Theory: Inferences and Text Comprehension, 25*, 89–102.

Meyer, B. J. F. (1985). Prose analysis: Purposes, procedures, and problems. In B. K. Britton & J. B. Black (Eds.), *Understanding expository text* (pp. 11–64). Hillsdale, NJ: Lawrence Erlbaum.

McKeown, K. R. (1985). Discourse strategies for generating natural-language text. *Artificial Intelligence, 27*, 1–41.

McKoon, G., & Ratcliff, R. (1989). Semantic associations and elaborative inference. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 15*, 326–338.

Miller, G. A., Galanter, E., & Pribram, K. H. (1960). *Plans and the structure of behavior.* New York: Henry Holt.

Millis, K. K. (1990). *The time course of constructing bridging and expectation knowledge-based inferences during the comprehension of expository text* (Doctoral dissertation, Memphis State University, 1989). *Dissertation Abstracts International, 50*, 2840-A.

Millis, K. K., Morgan, D., & Graesser, A. C. (1990). The influence of knowledge-based inferences on the reading time of expository text. *The Psychology of Learning and Motivation: Advances in Research and Theory: Inferences and Text Comprehension, 25*, 197–212.

Murachver, T., Murray, K., & Graesser, A. C. (1985). Answering some questions about a model of question answering. In A. C. Graesser & J. B. Black (Eds.), *The psychology of questions* (pp. 186–213). Hillsdale, NJ: Lawrence Erlbaum.

Neimeyer, R. A. (1985). *Development of personal construct psychology*. Lincoln: Nebraska University Press.

Newell, A., & Simon, H. A. (1972). *Human problem solving*. Englewood Cliffs, NJ: Prentice Hall.

Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84*, 231–279.

Norman, D. A., & Rumelhart, D. E. (1975). *Explorations in cognition*. San Francisco: Freeman.

Olson, G. M., Duffy, S. A., & Mack, R. L. (1984). Thinking out loud as a method for studying real-time comprehension processes. In D. E. Kieras & M. Just (Eds.), *New methods in the studying of immediate processes in comprehension*. Hillsdale, NJ: Lawrence Erlbaum.

Perfetti, C. A. (1987). Language, speech, and print: Some asymmetries in the acquisition of literacy. In F. Horowitz & S. J. Samuels (Eds.), *Comprehending oral and written language* (pp. 92–105). New York: Academic Press.

Potts, G. R., Keenan, J. M., & Golding, J. M. (1988). Assessing the occurrence of elaborative inferences: Lexical decision versus naming. *Journal of Memory and Language, 27*, 399–415.

Reder, L. M. (1987). Strategy selection in question answering. *Cognitive Psychology, 19*, 90–138.

Reiser, B. J., & Black, J. B. (1982). Processing and structural models of comprehension. *Text, 2*, 225–252.

Schank, R., & Abelson, R. (1977). *Scripts, plans, goals, and understanding: An inquiry into human knowledge structures*. Hillsdale, NJ: Lawrence Erlbaum.

Shanon, B. (1983). Answers to where-questions. *Discourse Processes, 6*, 319–352.

Singer, M. (1990). Answering questions about discourse. *Discourse Processes, 13*, 261–277.

Smith, A. E., & Medin, D. L. (1981). *Categories and concepts*. Cambridge, MA: Harvard University Press.

Stevens, A. L., & Coupe, P. (1978). Distractions in judged spatial relations. *Cognitive Psychology, 10*, 422–437.

Trabasso, T., & van den Broek, P. (1985). Causal thinking and the representation of narrative events. *Journal of Memory and Language, 24*, 612–630.

Trabasso, T., van den Broek, P. W., & Liu, L. (1988). A model for generating questions that assess and promote comprehension. *Questioning Exchange, 2*, 25–38.

Tversky, B., & Hemenway, K. (1983). Categories of environmental scenes. *Cognitive Psychology, 15*, 121–149.

van der Meij, H. (1987). Assumptions of information-seeking questions. *Questioning Exchange, 1*, 111–117.

VanLehn, K. (1989). Learning events in the acquisition of three skills. In

Program of the Eleventh Annual Conference of the Cognitive Science Society (pp. 434–441). Hillsdale, NJ: Lawrence Erlbaum.

Wilensky, R. (1983). *Planning and understanding: A computational approach to human reasoning*. Reading, MA: Addison-Wesley.

Winston, P. H. (1984). *Artificial intelligence*, Reading, MA: Addison-Wesley.

Woll, S. B., & Graesser, A. C. (1982). Memory discrimination for information typical or atypical of person schemata. *Social Cognition, 1*, 287–310.

Woods, W. A. (1977). Lunar rocks in natural English: Explorations in natural language question answering. In A. Zampolli (Ed.), *Linguistic structures processing* (pp. 521–569). Amsterdam: North-Holland.

14 Inquiries into the Nature and Construction of Literary Texts: Theory and Method

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Recent advances in literary and cognitive theories have challenged what Grumet (1988) calls "the myth of the meaningful text" in favor of the view that meaning is constructed during encounters with text. Despite these advances in theory, school curricula continue to recognize the authority of the text; text functions as a source of knowledge whose meaning is mediated by teachers, critics, and developers of instructional materials for students who are expected to reconstruct or restate it. Grumet has argued that "if we can just wrest meaning from the grip of knowledge and return it to art, we will be able to give students something to do with texts" (1988, p. 470).

In order for this shift to occur, we need to compile observational data on how classrooms function as interpretive communities, examining the processes of reader-text interaction and the texts that are generated during the interaction. These observations of how texts evolve in particular contexts are useful for exploring specific theoretical constructs and for providing ways of looking at literary discourse processes. By viewing the literary text in context, we may be able to provide additional evidence for challenging the authority of the text. That is, when context is considered, the role of the reader and of other participants in shaping the meaning of the text is evident.

The studies discussed in this paper explore the nature of the literary symbol and how it evolves during the process of reader-text interaction. Two questions guided the inquiries. The first question concerned how the reader constructed the literary text during the process of reader-text interaction, specifically addressing the contributions of the reader and the text. The second question focused on what literary text was constructed; that is, the interpretation that was generated from the interaction between reader and text. These questions were explored in terms of actual readers in educational settings rather than in terms of readers implied in the text.

Investigations into the nature and evolution of the literary text are within the domain of poetics or the theory of literary discourse. The goal of poetics is to make explicit and to test the grounds for the interpretation of meaning (Brooks, 1981). The individual work is not an instance of meaning but the possibility of meaning—the ways in which the text allows meaning to be made, thereby emphasizing the "constructedness" of literature (Brooks, 1981). According to Todorov (1981), poetics "aims at a knowledge of the general laws that preside over the birth of each work" (p. 6). Thus, Todorov argues, an individual work is representative of an abstract and general structure of literature, a particular case from a list of literary possibilities.

With the advent of reader-response criticism, particular attention from a range of perspectives has been directed to the role of the reader. Subjective critics, often drawing on psychoanalytical theories (e.g., David Bleich, Norman Holland), explored how readers projected personality onto the text; structuralists (e.g., Jonathan Culler, Seymour Chatman) considered features related to the readability of texts; rhetorical critics (e.g., Wayne Booth, Walker Gibson) addressed the nature of the implied author; and phenomenological critics (e.g., Roman Ingarden, Wolfgang Iser) were concerned with the effect of literature and the cognitive processes accompanying reading. These perspectives represent a shift from the view that meaning is in the text to the view that meaning occurs in the transaction between reader and text. Cooper observed that the result of this shift has been a "redirection of theoretical concern" toward individual readers and readings, as well as the general reader (1985, p. xii).

Phenomenological Criticism

With its emphasis on the role of the reader as a co-writer of the text, phenomenological criticism offers perspectives on the textual patterns that characterize the literary symbol. Roman Ingarden's work (1973) provided a foundation for the phenomenological approach. He described the purely literary work as containing gaps, spots of indeterminacy, schematized aspects, and a certain potentiality. The reader "concretizes" the literary work (i.e., makes the elements of the work explicit) by interpreting and relating information and resolving indeterminacy. To illustrate the process of making the text explicit, Ingarden employed the example of a reader who concretizes the detail of gray hair in reference to the words "a very old man," though the hair color is not mentioned in the text (Iser, 1978). In the reading process, the schematization of the work moves from the level of word and sentence meanings to the level of perceptual or imaginational experience.

The life of a literary work is reflected in its concretizations, represented in the various readings of different people. Thus, while individual concretizations are distinguished from the work itself, it is through these readings that we apprehend the work.

Wolfgang Iser's reception theory draws on Ingarden's phenomenological theory (Holub, 1984). While Ingarden viewed the reader as no more than a "literary handyman" who functions to fill in the text's indeterminacies, Iser grants the reader a greater degree of co-partnership with the text (Eagleton, 1983). Ingarden's theory reduces reading to a process of completing or filling in and does not allow for any exchange between reader and text; thus the work is not contingent on the reader for the formulation of its schematization (Ray, 1984).

Iser, on the other hand, is interested in the dynamic interaction between reader and text, a relationship that is a continual dialectic rather than a one-way sequence from author to reader with meaning an effect to be experienced (Ray, 1984). Iser's contribution is in the exploration of how each new fact is integrated into an organic whole, a pattern of coherence for the text (Ray, 1984). Concretization is thus a "living event," as opposed to a solidifying structure, since it is always open to revision. The reader shifts from one element to another, making connections between elements and transforming them into a "sign sequence" (Iser, 1978).

In Iser's functional model of reader-text interaction, the concern is not with what a text may mean but rather with how a text affects a reader (Iser, 1978). The text provides instructions that guide the reader in the development of the "signified" (i.e., the mental representation of the text). Readers produce signifieds that change during reading, thus signifieds are modified in a dynamic process of self-correction. Meaning gathers in a "snowballing effect" so the text is never grasped as a whole, only as a series of changing viewpoints.

Since the syntheses of signs do not solely reside in the text or in the reader's imagination, the distinctions between object and subject disappear. The text, virtual in nature, lies somewhere between the artistic pole of the author's text (e.g., objective theories) and the aesthetic pole of the reader's realization of the text (e.g., subjective theories). As a result of individual differences, the potential text can be actualized in multiple ways; thus, its potential is never fully realized. As Beach and Hynds (1990) noted, research has shown "that readers differ according to their stances toward texts and reading, social and cultural attitudes, personality, cognitive and social-cognitive attributes, and knowledge of social and discourse conventions" (p. 465). The range of individual realizations, however, is checked to some extent by the instructions embedded in the text. To illustrate the notion of instructions, Iser used the example of the character Allworthy in *Tom Jones*. When this character described as "perfect" is duped by another, the reader must transform denotations into connotations in order to reconceptualize the term "perfect." Sense is the totality of instructions implied in the many aspects of the text as constituted in the act of reading, while meaning is the transition of that sense into the reader's own experience (Iser, 1980).

From Iser's standpoint, the role of the text is to activate the reader's cognitive operations by providing guides or "governing rules" for constructing a text and making references to other works and social and cultural norms. By incorporating these extratextual references, the text creates a "horizon" that helps to specify the dialogue between text and reader (Iser, 1980). In this way, the text "questions or recodes the signals of external reality" (Iser, 1978, p. 74), enabling "its readers to transcend the limitations of their own real-life situation" (Iser, 1978, p. 79). For example, in Sterne's *Tristram Shandy*, the prevailing view of the "reliability of human knowledge" reflected in Lockean empiricism is challenged by the arbitrary association of ideas based on "personal whim" evident in Sterne's characters (Iser, 1978, p. 75). Thus, literary texts describe reactions to the world rather than correspond to an actual object in the real world (Iser, 1971).

The role of the reader in Iser's theory is illustrated in the concept of the implied reader, which allows for the reader's presence in the text. This reader is a construct rather than a real one, designating "response-inviting structures" that "impel the reader to grasp the text" (Iser, 1978, p. 34). The implied reader serves in the role the real reader is invited to play. To some extent, the reader must at least pretend to align himself or herself with the fictional reader in order to make the aesthetic experience possible (Rabinowitz, 1987). During the act of comprehension evoked by the text, the reader's wandering viewpoint moves within the text, both occupying an individual textual perspective (character, plot, narrator, or reader in the text) and synthesizing perspectives (e.g., character and plot).

Criticisms of Iser's Theory

While Iser's theory has been valued for its focus on the role of the reader and the effect of literature on the reader, there are some problems with the theory. Although Iser rejects the tenets of New Criticism, his theory incorporates its "assumption of a prior and independent text," thereby emphasizing the notion of textual constraints and limiting the contributions of the reader (Mailloux, 1982, p. 51). Fish (1980) challenged the existence of an independent text by arguing that every aspect of text is a product of an interpretive strategy and thus there is no independent text. Iser (1980) responded to this criticism by stating that words are given, their interpretation is determinate, and the gaps between elements and their interpretation are indeterminate. In Iser's theory the reader is allotted freedom, according to Holub (1984), when it does not count for much at all. The reader essentially either travels a predetermined path or misunderstands the text. Meaning, for example, is identified as the meeting place of various textual perspectives; that is, where the reader has filled in the "unseen joints" of the text, guided by instructions from the text. Thus, the text is more determinate than Iser's theory initially states (Ray, 1984). The reader must construct a text so that it is internally consistent; that is, a text in which the parts are adapted to a whole. This assumption, according to Eagleton (1983), reflects a doctrinal predilection.

A second concern with Iser's theory is that in its focus on the "microcosm of response," social and cultural historical factors are subordinated to the consideration of the text (see Beach, this collection). Mailloux (1982) observed that the model does not address sociological concerns of economic and political factors or larger social forces such as class and gender. Further, Iser's implied reader reflects a liberal bias in that this reader resembles an educated European attuned to social and literary norms of the day who is prepared to repudiate his or her ideological biases (Holub, 1984).

A Theoretical Framework for Research in Reader-Text Interaction

Reception theory, concerned with the process by which readers construct the literary work, served as a theoretical framework for a series of studies in which I investigated the nature of reader-text interaction. First, I applied aspects of phenomenological theory by analyzing the structure of the text. Second, I focused on the operations involved in reading the work, emphasizing communicative aspects of reader-text interaction.

The following tenets served as premises that guided my series of studies.

1. Text is constructed during reader-text interaction.
2. Text is a dynamic organism with various phases in its life.
3. The reader is cocreator of text, performing various operations.
4. Text offers guides for construction.
5. Text generates multiple interpretations.
6. Text construction involves the formulation and integration of textual perspectives.

My purpose was to explore more fully the role of text and reader in the process, and the question of how meaning is constructed. I was interested in how multiple readers constructed textual meaning in social contexts, which I explored by viewing text construction processes during reading-discussion events and during discussions following reading events. Focusing on these kinds of discussion events can illuminate how teacher-student interactions in the classroom influence the process of text interpretation.

In exploring the nature of reader-text interaction and the text generated from the process, I analyzed participants' use of textual cues and/or patterns. This approach reflected several assumptions about the text. First, any text put forth is a concretized text constructed by a reader interacting with the text. The creation of an analyst's constructed text, however, does not suggest a capricious interpretation against which all other constructed texts are to be measured. It is assumed that "something" exists prior to interpretation which generates some "in common" features of texts across constructed texts. That "something" is a feature of the shared language that provides the basis for communication; that is, "facts in the text" that can be agreed upon, such as the basic events that occurred in the story. Analysts, for example, may agree upon which narrative statements represent events and which events are central or less central to the narrative.

Following this analysis of the literary text, the participants' discussion of the text was analyzed. In two studies, the discussion following the reading of the story was the focus of the analysis. In three other studies, the unfolding of a text during a lesson was considered. My approach, then, was to observe an ongoing process of text construction. Participants' comments were considered in light of the text which I concretized, pertaining to the textual perspectives identified by Iser (character, plot, narrator, reader in the text). More specifically, I was interested in how readers engaged in such processes as formulating and modifying expectations about events, integrating information into constructs of characters, and signaling an awareness of the narrator and reader in the text.

One limitation of this approach is that the text which emerges in the discussion does not reflect the complete text constructed by the reader; that is, the articulated text does not represent all aspects of the text present in the tacit dimension (Polanyi, 1967). A second limitation is that all group members may not reveal their text by talking about it during group discussion. Because the process involves social interaction, some group members may contribute more than others; thus to some extent the group text masks the individual's text. Moreover, a gestalt is never rendered since speakers in a discussion group attend to selective aspects of the text dictated, in part, by the nature of the social interaction process.

Studies in Readers' Construction of Text

The first of two studies involved nine of ten students who comprised the eighth-grade class in an alternative school. The purpose of the study was to explore how students constructed short stories both during the reading process and in the discussion following the process.

On the first day of the study, I met with the students and teachers and told them I was interested in how readers make sense out of stories. I asked the students about ways to find out about how readers do this. They responded with suggestions such as "ask him," "hook him up to an ESP machine," and writing. I described my interest in finding out what readers are thinking as they try to make sense out of stories in think-aloud journals, small-group discussions, and interviews.

In preparation for the think-aloud journal process, I began with a word association task (suggested by one of the teachers) as a way of getting students to associate thoughts with language. Each student wrote an association for ten words (selected from the short story "The Open Window"). Students then read the story and completed the word association task again. This time, some responses corresponded to those associated with the story. For example, one student initially put *disease* for *cure* and later put *rural-retreat* for *cure*, and *door* for *window* and then *French door*.

In the second session, the students responded to a story using written think-aloud protocols in their journals. Students then shared their responses to both the story and the procedure.

The teacher formed a group of four and a group of five students, each balanced in terms of reading ability and social interaction style. In subsequent sessions, about forty minutes in length, both groups completed think-aloud protocols on four stories and discussed the story either individually, in pairs, or in a small group with their teacher. The teacher stated that the purpose of the group discussion was "to make sense out of the story"; the discussion was videotaped. I interviewed members of the second group about the story either individually or in pairs. This process was alternated for each story. Thus, Group 1 participated in a small-group discussion on "Thank You Ma'am," "Blood on the Ice," and "The Wish," while Group 2 discussed "Thank You Ma'am," "A Mild Attack of Locusts," and "The Wish." In a later session, both groups read "The Drummer Boy of Shiloh," followed by a retelling task.

A preliminary review of the data revealed that the small-group discussions provided the most information about how the readers constructed meaning. The think-aloud protocols reflected low information, both in terms of times the reader made notes during the reading and the extent of the response at each juncture. That is, most students wrote few or, in some cases, no comments during the reading process. In a post-discussion session, students indicated that they did not like responding in journals because it was difficult to record their thoughts in writing and because it interrupted the flow of the story. They said discussion was the best way to respond, because after reading the story they could express their thoughts about it and talking with others helped to clarify things. Students felt the retelling task was ineffective because it was difficult to remember details and to represent what the author said, even though they knew the story.

As a result of this preliminary review, I decided to focus my analysis on the small-group discussions. More specifically, the focus of analysis was on how participants addressed two textual perspectives identified by Iser: character and plot. These perspectives were of interest because they constituted key patterns in narrative texts in general and were particularly relevant to the exploration of a survival story, "Blood on the Ice." In the first phase of analysis, I served as a close reader of the text, identifying textual information pertaining to plot and character as well as projecting cognitive operations that might be evoked. These cognitive operations included connecting dispersed units of information, anticipating outcomes of characters, and filling in the unwritten parts of the text (Iser, 1978). In the second phase of the analysis, all participants' utterances were transcribed and categorized according to the topic; the majority of utterances pertained to character and plot. An example of the analysis is presented here (Golden, 1987).

> *Author's text:* Agtuk grinned. The aurora borealis flickered across the ice pack, lighting it up like a pale moon. Agtuk staggered, and sank down . . . He [the bear] opened his great jaws. Then there was a sudden roaring smash . . . the bear stiffened . . . collapsed on the ice.
>
> *Researcher's text:* Had Agtuk grinned following the flash of light, the reader might have conjectured that the grin resulted from his spotting of the bear. The reader is not certain whether his collapse was due to a clever ruse to lure the bear or to his exhaustion from exposure and hunger . . . Until the actual account of the bear stiffening, the reader cannot know that the sudden roaring smash was not the bear's flashing paws that had cracked down on the ice.
>
> *Student's text:* At first when they said—when suddenly they started talking about—like it stopped. I was thinking the guy—suddenly it was talking about the guy's thought and then suddenly it just stopped. I didn't realize it was the bear that got shot. I thought it was just like the guy was just sitting there thinking, I'm going to die. The bear—and suddenly the guy shot the bear. First you think the guy is dead, and then suddenly the bear's got his brains blown out.
>
> *Researcher's text:* The text segments identified above help to clarify Mike's confusion. When Agtuk collapsed, his point of view abruptly ended and the reader had to shift to an objective point of view describing the encounter between the man and the bear. Until the bear collapsed on the ice, the reader could not be absolutely certain about the outcome.

Analysis of the discussion revealed students' processes of retrospection and anticipation, modification of expectations, combination of dispersed information, and references to text information for "facts" and to personal judgments for other interpretations. These cognitive processes were articulated by the students as they interpreted the text and looked back upon their reading processes.

The analysis also showed how participants interacted with each other to construct the text by confirming, challenging, modifying, and extending each other's responses. The following segment illustrates how participants confirmed and extended each other's responses in their discussion of characters.

> *Teacher:* They were very different approaches to life, the polar bear, the fox, and the man.
>
> *Mike:* Well, they were all the same too. They all had the same approach but it was also different.
>
> *Teacher:* In what ways were they the same?
>
> *Mike:* Well, they were all out there for one thing.

> *Neal:* Survival, they were all trying to survive.
>
> *Mike:* They were all out there, but, you know . . .
>
> *Teacher:* But they went at it differently.
>
> *Mike:* The guy's thinking about being the famous dude in the village.
>
> *Neal:* And the bear's thinking about how his mother killed all the foxes. (Golden, 1987, p. 180)

The analysis thus made visible the interpretive process that Iser postulated for the implied reader and for the dynamic nature of the text reflected in the shifting stances of the readers. Both readers and text contributed to the construction of meaning.

In another study (Golden, 1986), I examined text construction processes across both groups and different stories. The transcribed discussion revealed that students selected and integrated information, filled in gaps, interpreted text information, and linked the text to self and the world. Group members challenged, modified, and confirmed interpretations of other participants. "Facts" in the text were generally not challenged, although if a participant misconstrued a fact, another participant referred the student back to the text passage. Interpretations, such as judgments of characters' actions and personalities, were occasionally challenged by group members; however, in these instances the individuals remained firm in their judgments. In one instance, for example, a student criticized a character in Lessing's "A Mild Attack of Locusts" for her passive behavior and willingness "to do just about anything." The reader maintained this interpretation of the character based upon how she thought women should behave, despite another student's point that the character should be viewed in the time in which she lived. This suggests, as I. A. Richards (1929) observed, that readers' beliefs can influence the interpretation of literature.

Another observation concerned how certain texts generated discussion of particular textual perspectives. Character and plot, for example, were the focus of discussion for "Blood on the Ice." Character and setting were addressed in "A Mild Attack of Locusts," where an American woman reacted to life on a farm in Africa. In "The Wish," participants centered their discussion on the central character whose imaginative, internal world was revealed, and participants related their personal experiences to those of the character's. This observation illustrates how text plays a key role in the process of text construction, generating multiple possibilities for interpretation, yet also guiding the interpretations.

In order to probe more fully the contributions of reader and text in the reading process, a third study (Golden & Guthrie, 1986) was conducted. In this study we addressed how text and reader factors contributed to variation and divergence in reader response. More specifically, we focused on reader factors of beliefs concerning mother-daughter relationships and empathy for characters, and on text factors of story events and conflicts between characters, and on the relationships between the factors. Sixty-three ninth-grade students from four classes of one teacher participated in the study. Students read the short story "Reverdy." Following the reading, students indicated the response they agreed with from a list of predesigned response categories. Three responses were provided for each of the four categories. More specifically, three versions of the plot (events), of the theme (conflict), of readers' empathy, and of readers' beliefs were provided.

There was a high degree of agreement on the events in the text, supporting Iser's notion of the high intersubjective agreement for plot. There was also a convergence of responses in the category of readers' beliefs about mother-child relationships, supporting the notion of shared beliefs in a particular age group. Divergence in responses was evident in the categories of readers' empathy and interpretation of conflict. A significant relationship existed between these two categories, suggesting that readers' empathy for a character influenced their interpretation of conflict in the story. (One limitation of this approach is that the reader's response is channeled by the category. Readers chose which category they agreed with the most, rather than actually articulating their own responses.)

These studies, driven by reception theory, suggest that the reader is a co-writer of the text, that the text generates multiple interpretations, and that the text has a series of phases in its life, reflecting its dynamic nature. One phase of a classroom text event occurs when individual readers construct a text, and a second phase happens when readers interpret that text in a group discussion.

The Influence of Instruction on Text Construction

In studying responses in classroom discussions, it is important to consider Saussure's (1959) concept of *langue* (language) as well as his concept of *parole* (speech). The purpose of another three studies was to identify aspects of the text's system (language) that would be useful in analyzing the construction of text in a classroom context (speech).

In Study 4 (Golden, 1988a), two teachers read aloud the same picture book, *The Way the Tiger Walked*, to two different groups of primary grade children. During the reading process, teachers engaged the children in talk about the narrative, and following the reading the children were asked to retell the story. Retellings for each teacher's students were analyzed and compared. In the first stage of analysis, the literary text was examined in terms of its episodic structure; the goal-oriented episode with its psychological correlate was determined to be useful for analyzing students' recall of text (Mandler & Johnson, 1977; van Dijk, 1982). In the second stage, the teachers' utterances during the storyreading event were analyzed in terms of instructional units and themes or topic-based interactions between teachers and students (Green, 1978). These instructional units were then classified according to whether they were episodically based, text-related, extratextual, or other. Student protocols were scored according to which episodes and episodic elements were recalled. Students in the group of the teacher who emphasized episodic information recalled more episodes and elements than did those of the teacher who stressed text-related and extratextual information. The teacher who signaled aspects of the text's system, therefore, influenced students' recall of these aspects, emphasizing the critical role of the text mediator in the text construction process.

In Study 5 (Golden, 1988b), I examined how a teacher mediated a text during a reading lesson in a sixth-grade classroom. The lesson was one in a series of lessons observed over a sixteen-day period in a sixth-grade classroom. Unlike the previous studies mentioned, the teacher selected the text and developed the lesson in association with a basal reader. The purpose of the study was to explore what the teacher and the basal authors signaled as important to the students in the text construction process.

The study, which was observational in nature, involved taking fieldnotes and videotaping a reading lesson. The lesson evolved over a two-day period, and the students were in the higher of two ability-based groups. On the day preceding the lesson, students were asked to read the story at home, answer questions following the story, and complete a vocabulary assignment. On Day 2 of the lesson, students took turns reading the story aloud, and the teacher introduced questions at various points during the reading process. At the end of the lesson, teacher and students discussed the questions.

In order to determine what the teacher and basal authors emphasized, I analyzed the text, "The Tower," a horror story from a sixth-grade basal reader, in terms of the global event structure (van Dijk, 1980). In this model, macrostructures are the semantic structures of discourse which integrate the meanings of a sequence of propositions. The superstructure reflects the organizational structure of discourse, such as the setting, complication, and resolution of narratives (van Dijk & Kintsch, 1983): story space (setting), character, person (whether the story is narrated by a character or by a narrator who is outside the story), and point of view (from whose perspective the story is told) (Booth, 1961; Chatman, 1978).

I also analyzed the nature of instructional mediation (i.e., basal manual questions and teacher's utterances) both during and following the oral reading of the text in relationship to event structure, character, setting, and point of view. A sample of the analysis is presented in Figure 1 (Golden, 1988b).

Since the phase of the lesson analyzed represented the teacher's discussion of the text as students read it aloud, it was possible to correlate the teacher's utterances with specific segments of the text as they unfolded during reading. The utterances were classified according to which textual dimensions they signaled. The analysis revealed that certain aspects of the text were marked more than others. For example, during the reading process, the teacher focused primarily on point of view with one other utterance referring to setting. In addition, the analysis showed that the teacher and basal authors performed the act of interpreting the text for the students, rather than inviting them to participate in the process of text construction. This is illustrated by a question in the basal asked by the teacher following the reading

Text Segment	*Basal's Teacher Manual*	*Text Aspect Signaled*	*Teacher Mediation (Text Level)*	*Text Aspect Signaled*
Episode 1	Describe the tower as Caroline saw it from the outside.	Setting	"What has happened? Got one thought, right? She knew she wanted to take the fork to the left to Florence and home. And, we're gonna go to a different thought."	Point of view
	What are her reasons for going into the tower?	Point of view (character's goals)		
	Is there any reason that she may regret her decision?	Events (foreshadowing)		
	What is inside the tower?	Setting		

Fig. 1. Nature of instructional mediation during and following oral reading.

process: "Why was Caroline brave?" The interpretation of the character is thus embedded in the question, and students are asked to find textual support for it.

In Study 6 (Golden, 1989), a second reading lesson in the same classroom was analyzed. Students participating in this lesson formed the "lower" reading group. I examined a five-day lesson on an autobiographical narrative, an excerpt from *The Barrio Boy*. The components of the lesson were captured by Morris's (1985) five-term relation which notes the sign, the interpreter, the interpretant, the signification, and the context. This semiotic perspective considers not only the author's text (sign) and the reader (interpreter), but also the text that is constructed in the process (interpretant).

The shift in focus also necessitated considering perspectives from sociolinguistics that pertain to classroom processes (e.g., Bloome & Green, 1982). The first phase of analysis in Study 6 was the description of text features related to dimensions of structure (e.g., van Dijk, 1980) and voice (e.g., Booth, 1961). The teacher's text which accompanied the author's text (read aloud by the students) was analyzed primarily in terms of which aspects of text were signaled by the mediators. The interpretant (constructed text) shaped by the teacher and basal authors was considered in light of the relation between the text and society (i.e., the view of acculturation) and the nature of students' developing competence with written symbols (i.e., the role performed by the students). Analysis of the reading lesson revealed that several contextual influences were operating during the text construction process, including: (1) the basal authors' and the teacher's perceptions of important textual information and reading strategies, (2) the teacher's view of procedures for participating in the lesson, (3) the instructional purposes for reading literary texts, and (4) the role of the text in reader response.

Conclusions

The studies discussed in the previous pages explored aspects of reader-text interaction in terms of how and what kinds of literary texts are constructed by readers. In these studies, individual works and text events were analyzed to illustrate selected theoretical constructs, primarily drawn from Iser's reception theory. In contrast to the critical practice of employing a projected reader (i.e., the educated liberal European) of "classics" from the literary canon, these studies drew upon empirical data—actual readers in educational contexts. Thus, the public reading event was emphasized, rather than the private reading event.

While a general theory of reader-text interaction framed all of the studies, different aspects of the theory were foregrounded in various studies. As noted previously, six constructs from Iser's theory served as the premises underlying the studies. The first three studies with junior high school students explored the premise that texts are generated during the interaction between text and reader. In the first two studies, both the premise that the text provides guides for its construction and the premise that the reader performs specific cognitive operations in constructing the work were explored. More specifically, readers' activities of integrating information into textual perspectives was considered. In the three studies, contributions of both text and reader in the creation of the work were evident in the aspects related to the "something" in the text that readers could agree upon (e.g., the events in the narrative) and in the aspects that produced divergence (e.g., conflict in the story and value judgments about characters). The premise regarding the potential of the text for generating multiple interpretations was evident from the analyses. Further, the analyses illustrated the important contributions of the reader which seem to be minimized in Iser's critical practice.

These exploratory data point to the value of empirical studies for addressing the role of the reader and the text in the evolution of the literary symbol. An essential point of this paper is that, in order to explain these data, I had to move beyond reception theory to adopt a more multidisciplinary perspective. In four of my studies, I analyzed textual perspectives by drawing on rhetorical criticism, text linguistics, and structuralist criticism, allowing me to examine the intersection between reader and text in an educational setting. A structural analysis of a literary text, for example, enabled me to determine which aspects of the text the teacher (and developers of instructional materials) signaled for students, thereby comparing aspects of a potential text and the teacher's realization of that text.

Since reception theory's perspectives on the role of the reader and structuralist's perspectives on the nature of the text did not fully address the role of context in the literary symbol, it was necessary to extend the theoretical framework by incorporating constructs from semiotics (Morris, 1985). Scholes (1982) has demonstrated how Peirce's notion of the triadic relation of the sign captures the literary discourse process in classrooms. In Scholes's view, the author's text (sign) serves as a primary text which generates a series of secondary texts (interpretants) which stand in relation to a narrative (object). Semiotics thus provides a framework that captures global dimensions of the literary discourse process, while reception theory and structuralist theory explore specific dimensions within this framework, such as sign-interpreter connections and sign-interpretant features. The studies discussed earlier also illustrate the need to employ multiple perspective analyses in the study of literary discourse.

Adopting a multidisciplinary perspective also serves to highlight limitations in the studies discussed above, several of which have been mentioned. The individual's private construction of text is masked or hidden to some extent in the social process. Knowing a reader's constructed text through his or her articulation of the text is exacerbated in the social situation and the cultural context where some participants may be more vocal than others. When the teacher is more vocal than the students, as evident in the studies discussed above, student voices may be channeled by the teacher's mediated text or may even be negligible, legitimizing some interpretations over others (Eagleton, 1983). This type of observation, on the other hand, can provide insights into the instructional processes associated with the development of students' literacy competence. Further, as Bloome and Bailey argue in this collection (Chap. 11), concepts and their relationships to other concepts are defined during social interactions. Thus, the literary text and its relationship to other texts is determined, in part, by how participants generate it during a classroom event.

If one accepts the premise that texts are constructed, a second limitation is that the interpretation of what occurs during the text construction process is dependent upon how the text was initially constructed by a researcher-analyst. The participants' texts are thus viewed according to the conception of text generated in a preexisting analysis. This presents a potential problem, in that the claims about reader response are based upon a selective view of text which emphasizes some aspects while omitting others. If the analyst's view of text is problematic, then the interpretation of reader response is also problematic. This problem is tempered to some extent when the researcher employs analytical schemes recognized as appropriate by interpretive communities, yet this approach values certain conceptions of text over others. Moreover, the creation of an analyst's text is more acceptable if one subscribes to the belief that there is "something" in the text that influences the interpretive process. The presence of at least two texts—the researcher-analyst's and the participants'—does, however, underscore the premise related to the dynamic nature of the text which has various phases in its life.

The perspectives I employed in these studies fall generally under the rubric of reader-response criticism. Reader-response criticism has been praised for restoring the role of the reader in the literary discourse process, yet it has also been criticized for faltering in terms of addressing the issue of social and cultural meanings. Poststructuralist critics have argued that reception theory in particular supports a model of the text in which the subject creates a written or oral statement that provides the meaning of a primary text. Rather than viewing interpretation as a new text, therefore, reception theorists support the notion that interpretation is "derivative, parasitic, or marginal" (Holub, 1984, p. 158). These opposing conceptions underscore the need to explore further our assumptions about texts and the nature of interpretation. Reception theory functions as one starting point for examining the nature of readers' and authors' texts.

References

Beach, R., & Hynds, S. (1990). Research on response to literature. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research: Volume 2* (pp. 453–489). White Plains, NY: Longman.

Bloome, D., & Green, J. (1982). The social context of reading: A multidisciplinary perspective. In B. A. Hutson (Ed.), *Advances in reading/language research: Vol. 1* (pp. 309–338). Greenwich, CT: JAI Press.

Booth, W. C. (1961). *The rhetoric of fiction*. Chicago: University of Chicago Press.

Brooks, P. (1981). Introduction. In T. Todorov, *Introduction to poetics* (pp. 1–13). (Richard Howard, Trans.). Minneapolis: University of Minnesota Press.

Chatman, S. (1978). *Story and discourse: Narrative structure in fiction and film*. Ithaca, NY: Cornell University Press.

Cooper, C. (1985). *Researching response to literature and the teaching of literature*. Norwood, NJ: Ablex.

Eagleton, T. (1983). *Literary theory: An introduction*. Minneapolis: University of Minnesota Press.

Fish, S. (1980). *Is there a text in this class?* Cambridge, MA: Harvard University Press.

Golden, J. M. (1986). Story interpretation as a group process. *English Quarterly, 19*, 254–266.

Golden, J. M. (1987). An exploration of reader-text interaction in a small group discussion. In D. Bloome (Ed.), *Literacy and schooling* (pp. 170–192). Norwood, NJ: Ablex.

Golden, J. M. (1988a). The construction of a literary text in a story-reading lesson. In J. L. Green & J. O. Harker (Eds.), *Multiple perspective analyses of classroom discourse* (pp. 71–106). Norwood, NJ: Ablex.

Golden, J. M. (1988b). Text and the mediation of text. *Linguistics and Education: An International Research Journal, 1*, 19–43.

Golden, J. M. (1989). Reading in the classroom context: A semiotic event. *Semiotica, 73,* 67–84.

Golden, J. M., & Guthrie, J. T. (1986). Convergence and divergence in reader response to literature. *Reading Research Quarterly, 21,* 408–421.

Green, J. L. (1978). Pedagogical style differences as related to comprehension performance: Grades one through three (Doctoral dissertation, University of California, Berkeley, 1977). *Dissertation Abstracts International, 39,* 833A–834A.

Grumet, M. R. (1988). Bodyreading. In W. F. Pinar (Ed.), *Contemporary curriculum discourses* (pp. 453–473). Scottsdale, AZ: Gorsuch Scarisbrick.

Holub, R. C. (1984). *Reception theory: A critical introduction.* London: Methuen.

Ingarden, R. (1973). *The cognition of the literary work of art.* R. A. Crowley & K. R. Olson (Trans.). Evanston, IL: Northwestern University Press. (Original work published 1937).

Iser, W. (1971). Indeterminacy and the reader's response. In J. H. Miller (Ed.), *Aspects of narrative* (pp. 1–45). New York: Columbia University Press.

Iser, W. (1978). *The act of reading: A theory of aesthetic response.* Baltimore: Johns Hopkins University Press.

Iser, W. (1980). Texts and readers. *Discourse Processes, 3,* 327–343.

Mailloux, S. (1982). *Interpretive conventions: The reader in the study of American fiction.* Ithaca, NY: Cornell University Press.

Mandler, J., & Johnson, N. (1977). Remembrance of things parsed: Story structure and recall. *Cognitive Psychology, 9,* 111–151.

Morris, C. (1985). Signs and the act. In R. E. Innis (Ed.), *Semiotics: An introductory anthology* (pp. 178–179). Bloomington: Indiana University Press.

Polanyi, M. (1967). *The tacit dimension.* Garden City, NY: Anchor.

Rabinowitz, P. (1987). *Before reading: Narrative conventions in the politics of interpretation.* Ithaca, NY: Cornell University Press.

Ray, W. (1984). *Literary meaning: From phenomenology to deconstruction.* Oxford, England: Basil Blackwell.

Richards, I. A. (1929). *Practical criticism.* New York: Harcourt, Brace & World.

Saussure, F. de. (1959). *Course in general linguistics.* C. Bally & A. Sechehaye (Eds.), with A. Reidlinger; W. Baskin (Trans.). New York: Philosophical Library. (Original edition published 1915).

Scholes, R. (1982). *Semiotics and interpretation.* New Haven, CT: Yale University Press.

Todorov, T. (1981). *Introduction to poetics.* Richard Howard (Trans.). Minneapolis: University of Minnesota Press.

van Dijk, T. A. (1980). *Macrostructures.* Hillsdale, NJ: Lawrence Erlbaum.

van Dijk, T. A. (1982). Episodes as units of discourse analysis. *Georgetown University Round Table on Languages and Linguistics 1981,* 177–195.

van Dijk, T. A., & Kintsch, W. (1983). *Strategies of discourse comprehension.* New York: Academic Press.

15 Articulating Poststructural Theory in Research on Literacy

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Let me set the record straight before I try to represent my work on literacy. I am not a social scientist. I have spent my intellectual life tinkering with theories of language in hopes of becoming a good writer and teacher of writers. I suppose that makes me a tinker, for a tinker is someone who tries to fix things but is not, alas, an expert and so is just as likely to break as to repair the object. I would say that describes my work with theories of language: I try to make them work not because I am an expert (though I hope I have become a better theorist over time), but because theories are all I have to work with when my experiences of writing and teaching leave me baffled. While all that tinkering has led to collecting data and analyzing or interpreting data, it is theories, not methods, that I work at the hardest, and theories, not methods, that I understand the best.

The theories I have tinkered with, in one way or another, consider language to be a form of social action. Over time I have altered my definition of "social action" to include social activism; this has meant, among other things, coming to see that my interest in what words can do is not a simple curiosity about language, but a faith in words that belies reason. I was a child who recited "sticks and stones may break my bones, but words will never hurt me" as an incantation against pain, not as an article of faith. And I am an adult who fully recognizes the privileges of living in a world where the threat of words has been considerably more imminent than the threat of wars.

Literacy is the trope of my desire for social and political equity. I imagine universal literacy to be counter-hegemonic, and so I view the writing and recovery of slave narratives and African American fiction along with the writing and recovery of women's texts as much-needed critiques of official history. In *And We Are Not Saved* (1987), the remnants of African slave storytelling traditions in Derrick Bell's imaginary interlocutor, Geneva, are, to my mind, largely responsible for the force of his treatise on the African American struggle for equity in this century. And in her afterword to *Not So Quiet . . .* (1989), I see Jane Marcus as continuing to rewrite the history of the suffrage movement in light of Helen Zenna Smith's novel about British women volunteers who paid to drive ambulances in World War I:

> The study of World War I and its effects on women in England begins with the acknowledgment that all wars destroy women's culture, returning women to the restricted roles of childbearing and nursing and only that work that helps the war effort. The struggle for women's own political equity becomes almost treasonous in wartime. . . . Any account of women's wartime energetic and responsible performance of social labor must recognize that that performance in the public sphere came from the previous struggle against an immensely hostile state to win the elements of education, knowledge, and skills that any democracy customarily grants its citizens, but which, in Edwardian England, were systematically denied to half the population. (Marcus, 1989, p. 249)

These and similar literacy projects are seen as extraordinary rather than ordinary uses of writing, but all literacy campaigns in this country and around the world are justified, in my mind, by such struggles for the education, knowledge, and skills denied to slaves, women, and a variety of unwelcome immigrants by governments indifferent at best and hostile at worst to people's well-being. Yet Derrick Bell's Geneva—as wonderful an invention as I find her—necessarily modulates Bell's voice, which speaks out on behalf of those whose stories illiteracy silences.

Literacy as Discursive Practice

It is not that I believe that literacy is in itself liberating. It is that I would like to hear firsthand from all the Genevas. If my work has been motivated by the coincidence of literacy and liberation, my writing has been an attempt to account for our failure to make literacy an offer people cannot refuse. I do not think the United States made such an offer in the Reagan era, and I do not think it is likely to do so in the near future unless we begin to think more about writing and reading as discursive practice and less about them as a set of skills or abilities or competencies to be taught by "us" and learned by "them." To conceptualize literacy as discursive practice is to link the "literacy events" that Shirley Brice Heath (1983) has studied on the local level (e.g., families, communities, classrooms, and churches) to the more remote and less visible, but critical, historical and sometimes even historic circumstances (e.g., acts of Congress and acts of war, economic indicators, voter registration campaigns, and computer technologies) that also determine the social, economic, and political meaning and value of literacy. This is by way of saying that the political events that impinge upon the meaning and value of literacy events also shape, and in some cases even dictate, policies that ground curriculum, pedagogy, programs, and research. And it also says that the macro- as well as micropolitics surrounding literacy alter the boundaries of social context, for in addition to the usual local participants such as students, teachers, parents, administrators, and employers, we also need to consider legislators, legislation, and legislative histories, not to mention the middle-level bureaucrats who administer funds for research grants and programs. Even this preliminary list of possible participants is enough to suggest that the people who make up the network involved in literacy programs, literacy education, literacy events, and literacy research will not be evenly committed to any one definition of literacy, let alone to its meaning and value to students. I suppose this is a way of saying that their discursive practices will vary considerably and that this variation is what we need to study if we wish to find out why people have been refusing our offers of literacy.

That politics figure in literacy seems to me obvious. That we can ignore them in principle, on whatever grounds, in theory and research and practice does not mean that we have rid ourselves of politics, but means instead that they operate covertly rather than overtly in our programs, classrooms, and studies. To think of literacy in terms of discursive practice means trying to identify the political as well as the cognitive and cultural dimensions of literacy in theory, research, and pedagogy; a matter of our becoming as suspicious as the mother, in Brecht's play of the same name, of the imperious teacher who finally agrees to write *class struggle* on the board only to break faith with the students by saying:

> Be sure to write in a straight line, and not over the edge. Whosoever overwrites the margin also oversteps the law. (1965, p. 78)

Like Brecht's mother and workers, I would like to think we recognize this refrain from "Praise of Learning" as the proper response to the cynical teacher who would disguise the political and economic privileges of the literate in the law:

> Study, man in exile!
> Study, man in the prison!
> Study, wife in your kitchen!

Study, old-age pensioner!
You must prepare to take command now!
Locate yourself a school, homeless folk!
Go search some knowledge, you who freeze!
You who starve, reach for a book:
it will be a weapon.
You must prepare to take command now. (1965, p. 79)

However naive the words sound when read rather than heard as a song, the mother's position is, I hope, also ours. I know that I would not be a scholar today had I only learned such rules and regulations, and I would like to think that a good many of us in this field are willing, and some of us quite eager, to write in the margins and to encourage students to do the same. Perhaps I say that not because I read between the margins but because I write in them, or because I see margins as the borders defending print against those readers who write back.

In any event, my dreams for a universally literate and critical citizenry are most visible on the margins of printed and social texts, where anything from Brecht's play to Bell's Geneva to Smith's ambulance drivers, and who knows what else, can happen. The kinds of contradictions I have written about in "Tropics of Literacy" (1986) or in "On the Subjects of Class and Gender in 'The Literacy Letters' " (1989a) or even in "Transvaluing Difference" (1989b)—contradictions between the literacy we define for ourselves and the literacy we define for others, or between our educational goals and our teaching practices—do not qualify me as a critical theorist. It is true that I am attracted to theories that allow me to critique programs and policies and practices that reproduce inequitable social arrangements, and it is true that my work is critical of theories and studies of literacy that ignore the politics of pedagogy and that insist on locating literacy education on some supposedly neutral terrain where the political arrangements contributing to literacy and illiteracy alike are deemed moot. But it is also true that I have constructed most of my studies as well as my arguments from poststructural theories of language and discourse, none of which were available to the founding members of the Frankfurt School. And it is also true that the influential contemporary Frankfurt theorist, Jurgen Habermas (1981), dismisses Michel Foucault, the theorist whose work has most influenced mine, as a neoconservative who summarily rejects the modern world. I do not think of either Foucault's work or my own as conservative, although I am more than a little wary, and I would like to think that Foucault would also have been, of the modernist assumptions that function as truisms in writing research and teaching (Brodkey, 1987a, 1987b).

The Hegemony of Naive Empiricism in the Study of Language

While not wishing to ignore the importance of the early Frankfurt School on my thinking (Brodkey, 1987c), in particular the notion of negative critique (Horkheimer, *Critique of Instrumental Reason* [1974] and *Critical Theory* [1972]), I am considerably less interested in the Frankfurt critique of the politics of positivism than in the poststructural critique of the politics of empiricism. In both cases, however, theory is less at issue than the unchecked *hegemony* of positivism or empiricism over what counts as real or worthwhile in research. I think that the Frankfurt theorists mostly objected to the positivist hegemony over social inquiry via the valorization of logic at the expense of what they saw as the human desire to remember the past and to envision a future and better world. At the end of this century, positivism no longer reigns supreme in the academy or elsewhere (though it still dominates some philosophy departments and schools of education), but I doubt that anyone credits the Frankfurt School with single-handedly routing the exclusive value of logic in the social sciences. I would guess that the proliferation of social theories and research methodologies in the social sciences in the last three decades has as much or more to do with widespread misgivings about analytic philosophy and formal logic (e.g., Toulmin, 1958; Perelman & Olbrechts-Tyteca, 1969; Kinneavy, 1971), in particular, the limited use and value of probability outside of theoretical mathematics and sciences like modern theoretical physics that rely on such notions.

The hegemony that poststructural discourse theories specifically counter may sometimes be called positivism, but it is probably better characterized as naive empiricism, which I take to be the belief that scientific method guarantees the objectivity of the researcher along with the research (see Brodkey, 1987a, 1987b). Haraway (1988) argues that only nonscientists actually seem to believe in the "doctrines of disembodied scientific objectivity— enshrined in elementary textbooks and technoscience booster literature" (p. 576) and, further, that that version of objectivity is neither desirable nor possible for a number of reasons she links to literal and figurative human vision. First, vision, our literal and figurative perception of reality, is limited to what can be seen/"seen" from a particular position. Although Haraway dismisses any possibility of transcendent scientific objectivity, her argument is a dismissal of neither science nor objectivity. It is instead a case for modesty in science, a long overdue recognition that any and all knowledge, including that arrived at empirically, is necessarily "situated knowledge." Second, that we view the world from a particular vantage point also means that what can be seen by either a human eye or a human theory is necessarily partial, that is, both an *incomplete* and *interested* account of whatever is envisioned.

The importance of Haraway's argument on the positioning and partiality of theories cannot be overstated, if only because it means that researchers should be as wary of relativizing as of totalizing claims, both of which she calls

> "god tricks" promising vision from everywhere and nowhere equally and fully, common myths in rhetorics surrounding Science. But it is precisely in the politics and epistemology of partial perspectives that the possibility of sustained, rational, objective inquiry rests. (1988, p. 584)

To my mind, the empirical naivete that besets those of us who study and teach writing and reading is just such a trick, and the assumption too often taken as fact in theory, research, and practice is the belief that not only can language be studied independent of thought and reality, but that language actually is only a tool for reflecting a given reality and for translating thought.

The structuralist separation of language, thought, and reality is a theoretical convenience (like the separation of form and content), not an empirical fact; it is simply a way to organize, regulate, and evaluate linguistic research on language. The structural argument concerning the arbitrary or neutral relationship between language and reality is an account of linguistic structural variation, an explanation that does not, as far as I can see, even attempt to describe and explain the structure of the social, political, and historical circumstances under which people speak and write. Structural linguistic theory is an attempt to explain not language, but only those parts of language that the theory finds linguistically interesting: in this instance, that phonological variation in the word, say for *cat*, in languages where such a word appears, is not linguistically meaningful, and thus the relationship between sound and sense is arbitrary. While it may be true that such familiar binary pairs as "man and woman" and "black and white" form a neutral or arbitrary linguistic structure, I doubt whether many women or blacks live in a world where the logic of linguistics is more compelling than the logic of sexism and racism.

Linguistic arbitrariness is the kind of situated knowledge that Haraway (1988) would see as contingent upon the positioned and partial vision of structural linguistics. Its limitations as an explanation for literacy practices have to do, however, not with linguistics but with our losing sight of the partiality of linguistics as a theory of language. At the risk of stating the obvious, it is naive to expect structural linguistic theory to provide a vantage point from which we can view and examine the sociopolitical relations linking language, thought, and reality in the production and reception of written or spoken texts.

Theory and Research

I began this essay with the conceit of the tinker, an image that seems even more suitable as I try to explain the partiality of theory as it concerns my own attempts to conceptualize literacy as a set of social or political practices, rather than as skills, abilities, or competencies. The theories I have been tinkering with most recently are all poststructural accounts of discourse; the version of discourse I have been piecing together from my reading of Foucault, particularly, and to a lesser extent my reading of Lacan and Derrida, is decidedly critical rather than dismissive of empirical research. Despite reservations I have about naive empiricism, which I see as scientific literalism or fundamentalism, my interest in empiricism has not waned. That is not to say, however, it has not been tempered by both feminist and poststructural accounts of the part language and discourse play in social constructions of reality. The absence of women as a category in many experimental studies, for instance, has materially affected women's lives, including my own, so I am not likely to forget that many studies claiming objectivity have ignored differences that matter (e.g., race, gender, class, ethnicity, age, disability, sexual preference, to name but a few) as "scientifically" or mathematically uninteresting. Yet the systematic erasure of these and other differences in social science research may be less a consequence of scientific method than the practice of "scientists," for differences that go unremarked in quantitative research are just as often ignored in qualitative studies (Brodkey, 1987a, 1987c, 1986). I think it fair to say that scientific objectivity has too often and for too long been used as an excuse to ignore a social, and hence a political, *practice* in which women and people of color, among others, may sometimes be used as tropes in research concerning a few white men (see Harding, 1988), but are rarely themselves the subjects of research.

Nowhere are the consequences of the bias against difference in educational research more clear to me than in the U.S. Department of Labor statistics (*Time of Change*, 1983), which I included in "Tropics of Literacy" (1986) and from which I argued that the value of literacy is not absolute but contingent on race *and* gender: "[Fifteen percent] of white male high school dropouts aged 22 to 34 live below the poverty line, compared to 28% of white females, 37% of black males, and 62% of black females" (Brodkey, 1986, p. 51). The gaps in these figures are dramatic enough to warrant a theory of literacy, as well as studies and teaching practices, sensitive to the simple fact that race and gender confound the meaning and value of literacy for social groups in ways that are not accounted for when we study writing and reading apart from the historical and political circumstances that have so invariably discriminated against both the education and employment of minorities and women (most ruthlessly against black women, if we take the figures seriously) that they are among those classes specially protected under civil rights law.

A poststructural theory of discourse has not spoiled my commitment to empirical research, but it has made me more aware of the theories that ground the analysis or interpretation of data. That is, my interest in poststructural theory has had more effect on how I analyze or interpret data than on how I collect them. I plan to go on designing research projects based on what people do as writers and readers and, given my longstanding fascination with anthropology, I am likely to continue collecting ethnographic data, that is, to concentrate on situational rather than experimental or quasi-experimental data. I see my choices here as having to do with my education and talents, not with any kind of principled objection to other ways of collecting data. Yet what I said earlier about not being a social scientist is most apparent not in my decisions concerning data collection (many social scientists conduct ethnographic or qualitative studies), but in my decisions concerning the analysis or interpretation of data.

When I look back over my work, I see myself struggling to develop a method for interpreting data consistent with poststructural discourse theory, that is, a method that assumes language, thought, and reality to be *interdependent*. Among the advantages of working from such a self-conscious theory as poststructuralism is that it is difficult to forget that it is a theory. That a theory is only a theory sounds like common sense, but one of the dangers all researchers as well as theorists face, if I understand Haraway's argument, is forgetting that a theory is an account of something, not the thing itself. While I doubt that anyone remembers all the time that the theory they are working from is only an account, and a partial one at that, a theory that begins by assuming the nearly invisible influence of discourses over our ability to imagine and reflect on who we are in ourselves and in relation to others and the world is, to my way of thinking, difficult to forget as a theory. I think of discourses in the same way physicists once thought of atoms: as conceptual rather than real objects. That would mean, I suppose, that my research has been an effort to discern traces of discourses in texts, in hopes that applied research will eventually catch up with the theory in much the same way experimental physics did.

I think structuralism falls short of our needs for many reasons, not least among them the commitment to a theory that transcends practice in favor of nomothetic accounts of linguistic universals (*langue* and *parole* in early versions, competence and performance in later ones). Direct and indirect consequences of the structural commitment to underlying and invariant rules can be seen in the history of applied research on writing and reading over the last twenty years (e.g., error analysis and miscue analysis, sentence combining, research on reading as comprehension, studies of decoding, protocols and protocol analysis, and models of composing, as well as research on style, coherence, cohesion, and so on). It is not that these notions are not interesting (at least I have found them so), but that even this cursory list, which is far from complete, clarifies as little else does the extent to which most literacy researchers and practitioners have come to see language as structural linguistics represents it. Much as there are narrators who simply forget that stories do not literally recover experience, there are scholars who forget that theories relate, rather than literally recover, the events they set out to explain. While forgetting may well account for the charm of some narratives, the same cannot be said of either theories or applied theories.

Discourse and Discursive Practice in Poststructural Theory

I have a penchant for both theories and narratives, so it is not all that surprising that I would be attracted to a theory grounded in a narrative that explicitly sets out to explain some of the problems in practice that have eluded or not interested either linguistic or literary structuralism. Even taking account of the variation in theories, sooner or later a poststructural theory argues that it is the discourses (or worldviews or ideologies) rather than the languages we learn that teach us how to read and write the world as well as words. I do not take this to be a metaphysical claim about reality, but see it instead as an assertion about what human beings can reasonably expect to know about reality. In other words, poststructuralism is best thought of as an epistemology: a theory of knowledge in which knowing is contingent upon discourses.

I understand the argument for the power of discourses over the human imagination to be grounded in Lacan's revision (1977) of the classical Freudian account of the division of the conscious from the unconscious. According to Lacan, when an infant (around eighteen months) first recognizes itself in a mirror, two things happen simultaneously: it sees itself as *over there* in the mirror, and it sees itself as *separate* from its mother. This moment of split or divided consciousness, literally experienced as a trauma (the child who is here also sees itself as over there, and sees that it is not its mother), motivates the child to learn language, for only language (specifically, personal pronouns) promises to reunify the now divided self—as an "I." Lacan argues that the child learns what he calls the language of the "father," a term that means a powerful discourse or ideology but which conflates the cultural power of the "father" and the syntactic power of language. The Lacanian term *phallologocentrism*, while outlandish at the outset, is probably more explanatory, for it stresses the West's fetishism of both the phallus *and* the word. Lacan's psychoanalytic narrative rewrites Freud's version of the Oedipal complex, also an account of the separation of the conscious from the unconscious, in terms of discourse. In Lacan's version the male child's unbridled lust for language is a desire to be the phallus, for it is the symbolic power of the phallus (discourse), not the physical fact of a penis, that promises unity; the female child is also beset by a desire to have the phallus, not to get a penis, for she too is driven by the same desire for the unity represented in the power of the language of the father. It is a fantastic, wonderful story and at the same time incredible (if you are not a psychoanalyst). Yet it is also an instructive story for those of us who wonder about the incredible tenacity with which many children acquire language, not to mention the faith that many of us retain in language—to put things right—in the face of unthinkable atrocities.

I have simplified the Lacanian narrative, which was written by a psychoanalyst for other psychoanalysts not for social scientists or for literary critics, in hopes of showing that the simple plot is also familiar. It is a modern romance, a quest—of the self for the self—in which the grail is language/discourse. Discourse in this version replaces the sense of being at one with self, other, and the world with a discursive practice that constantly maintains the illusion of a self unified as "I." The illusion is maintained in large part by the personal pronoun system, which grammatically regulates both person and number in more or less predictable ways. The discursive unity is only an illusion but is necessary (healthy), according to Lacan, if we are to survive the trauma of split or divided subjectivity.

The poststructural project is not to unmask discourses as false (that is the classical Marxist project) but to demystify them and the part they play in our constructions of self, other, and reality. Instead these discourse theories consider the part language plays in our constructions of self, other, and reality in *texts*. So if discourse is to function fruitfully as a concept for representing and distinguishing among ideologies or worldviews, we cannot continue using the word indiscriminately. I say this even though *discourse* probably has already achieved a ubiquity in the academy that is exceeded only by *paradigm* (see Kuhn, 1977). Like paradigm, however, discourse is a notion that loses much of its explanatory force when virtually everything is called discourse. By way of example, I think it is a serious mistake to call academic prose academic discourse. I say that in part because the variety in academic texts suggests not one but several discourses at work on academic writing practices, and in part because it gratuitously collapses a useful distinction between texts and discourses. We read and write texts, not discourses—at least my understanding of poststructural theory tells me to examine texts for traces of discourse or discourses. In other words, I see my work on literacy as a matter of studying not discourse but discursive practices via the production and reception of written texts.

Discourse

A great deal of what I would like to know about discursive practice in or out of the academy could be learned by positing and then examining the influence of the five interdependent discourses of science, law, art, education, and religion or ethics, which I introduced in my study of the awkward struggle for discursive hegemony in the correspondence between teachers and students (1989a). My point is that these worldviews or ideologies or discourses have been institutionalized, and have for a long time been understood as (and confused with) natural or proper ways of seeing and knowing and talking about things, such as reality or the self. In that study, I argued that the lapses in the teachers' letters could be better explained in a poststructural than structural analysis of their prose. The case I made rested on the extraordinary sway of educational discourse (which I believe to be a middle-class ideology that begins at home and extends to school) over their writing practices. The authoritarian educational practice of these teachers did not reduce their correspondents to "errors," but instead effectively silenced such "mundane" working-class concerns as violence and money. And at least some of the problems working-class people experience in school has to do with the prevalence and power of discourses, for one of the institutionalized discourses that might be at their disposal would be religion, and that is one discourse not permitted, at least in public schools. The secular version of religion, ethics, has been rendered problematic by disuse, so few teachers feel competent or comfortable discussing ethics. And art, a powerful discourse underwriting stories and storytelling, has undergone professionalization so that published texts and canonical works survive, while mundane narratives—the ones we tell each other—are ignored as anecdotes and hence go unanalyzed.

In the course of summarizing that study (Brodkey, 1989a), I wrote about the importance of recognizing difference:

> What is immediately challenged by the narratives is the rhetorical practice in which the privileges of one subject—to tell stories or decide what the topic is—materially diminish the rights of other subjects. What is ultimately challenged is the ideology that class, and by extension race and gender differences, are present in American society but absent from American classrooms. If that's true, it is only true because the representation by students of those concerns inside educational discourse goes unarticulated by teachers. (p. 140)

When I said earlier that the project is not to dismantle but to demystify discourse, part of what I hoped to make clear is that teachers are authorized by educational discourse, but that the discursive practice of dismissing difference (introduced by the working-class women in their narratives) is only one of many possibilities warranted by educational discourse. Looking at this correspondence as discursive practices is, to my mind, a way not only of examining teaching practices but of changing them. Judging from the letters sent to me by teachers who read the article, class conflicts of the sort the correspondents encountered are not unusual; some teachers recognized themselves in that article and found in the analysis of good teachers' educational discursive practices a way to begin reevaluating some vexing problems in their own classrooms.

James Henry and I (in press) used the same five discourses in our study of "voices" in a student paper written and revised for an undergraduate course on architecture—a field in which, we argue, the discourses of science and art are equally influential and in which traces of both discourses can be found in the discursive practices of architects and successful architecture students. To reiterate our explanation of what Stuart Hall calls articulation (1986), which I see as a crucial notion for anyone attempting to apply poststructural theory in research on writing and reading practices:

> By articulation Hall means both utterance and connection, and hopes to capture in the second definition the fact that an articulated joint may or may not connect to another. Discourses may well intend to construct social identities, but a theory of articulation, he argues, is needed to distinguish between hegemonic intentions and their uneven effects in practice. . . . Articulation is then a construct for recovering at least some of the complexity of what happens during attempts to identify and unify people as the subjects of discourse. (Brodkey & Henry, in press)

Articulation is crucial to the analysis of discursive tension in both "On the Subjects of Class and Gender" (Brodkey, 1989a) and the forthcoming chapter, "Voice Lessons" (Brodkey & Henry, in press), for it allows a researcher to trace a cycle of production and reception, to coordinate a writer's representations of self, other, and reality in a text with readers' responses to these representations.

The notion of voice that Henry and I use is a method for coding relationships between a discourse and its identifiable subjects in a text. We argue that all academic essays are authorized, in the first instance, by educational discourse which warrants a writer to teach a reader something. Beyond that first discursive warrant, however, claims could be warranted by any and all of the discourses: science, art, law, education, and religion or ethics. The student whose essay we studied in a series of drafts, on which both Henry and the professor commented, "experimented" with voices grounded in science and art. But in his final essay, the student "articulates" his claim in what Henry and I call the Voice of the Architect, by which we mean that he addresses himself to the teacher as if they shared the criteria for evaluating Buckminster Fuller, whose designs, the student writer concludes, "do not represent a balance between art and science" (Brodkey & Henry, in press). We attribute the articulation of this particular voice in the student's essay to both the teacher's use of a similar voice in his comments and Henry's advice to think of the essay as a conversation among architects. The point I want to make has to do with the possibilities that articulation and voice raise for analyzing or interpreting discursive practice. The student makes claims in at least three discourses—science, art, education—and he also calls on a number of voices in which to make them. The voice he finally uses to articulate his argument against Fuller as an architect, and for his teacher and himself as architects who know architecture as a balance of art and science, however, is only one of several we can identify in his drafts and is mostly important because it emerges as the dominant voice in his final essay.

Hall's essay on articulation (1986) limns an array of possibilities for applied poststructural research on the production and reception of spoken and written texts. Among the texts that most interest us are those that students write and teachers read. At least I think that response and revision is a cycle of production and reception that most of us wish we understood better, if only because it is a vexing chronicle of teaching and learning. On the one hand, we read and then advise students to revise their essays; on the other, we are often surprised by what students make of our comments in their revisions. The value of articulation to poststructural theory has to do with making distinctions between the intentions of discourses (which have to do with positioning people as subjects) and the effects in discursive practices (which have to do with whether people identify themselves as the subjects of a discourse). In other words, it is one thing to say that a particular dialect of religious discourse designates nonbelievers as heathens, and yet another to say that the consequences of being positioned as a heathen are evenly distributed. The value of articulation to us as researchers and practitioners also has to do with the notion of a discursive cycle, for articulation demands that discursive practices be studied in terms of both the writers/producers and readers/receivers of texts.

I think literacy and illiteracy lend themselves "naturally" to this kind of research on the cycle of intentions and effects, and I also think that those of us who teach writing and reading have acquired a wealth of practical experience of articulation that lends a special credence to the notion itself. I would like teachers to take articulation as an invitation to read poststructural theories, but to read them with practice and research on literacy in mind. For I think it goes without saying that the promise of poststructural theories of discourse and applied poststructural research on literacy relies on practitioners, not just practice.

This is an essay about the influence of poststructural theory on my research. I have tried to explain why I find poststructural theory more suitable an account of language and discourse than structural theory. And I have also tried to explain how I have applied a poststructural theory of discourse in my research on writing and reading as discursive practices. In trying to clarify relationships between theory, research, and practice in my own work, I have also tried to make what I believe to be a powerful theory of practice more intelligible to teachers and researchers. Conventional wisdom says that theory and practice go hand in hand. That does not mean, of course, that we are necessarily aware of either our theories or practices, or that we understand how they are related to one another. The relationship I would like to see more clearly is one in which research mediates theory *and* practice. Most theorists imagine that practice follows from theory, or would if practitioners only would pay attention to theory. But many practitioners say that theory is moot with respect to practice, which I take to be a critique not so much of theory as of theorists, particularly their tendency to speak only to one another. The future of literacy education and research on literacy, however, relies not on language theorists, not on researchers, not even on teachers as researchers, but on teachers knowing theories and assessing their value in research on literacy.

Poststructural theory of language and discourse is not made to order for research on literacy. At least I have not found it so. Instead, I approach every book and every article as a conversation overheard. I say this because it takes a good long while to catch even the gist of theoretical arguments, and longer still to begin reflecting on their relevance to research on practice. I am a patient and persistent reader, however, one who has grown accustomed to the bold claims that are only later modified in most theories, and one who has also grown accustomed to the awkward path of her own understandings. Theory is not an IQ test, and learning to read it is largely a matter of desire, leisure, and experience. In my case, the desire has been supported both by leisure in virtue of my academic appointment and experience in virtue of my education. Not many practitioners are as fortunate, and the material differences in our circumstances are meaningful. Yet I am nonetheless concerned that the separation of theory from research and practice in educational research does a good deal more damage to teachers and students than any of us realizes, and that only teacher-theorists can even hope to remedy the consequences of that division of intellectual labor (Aronowitz & Giroux, 1985). In any event, teachers should treat research without theory as a Haraway "god trick" and consider it as dangerous to practice as theory without research.

Discursive Practice

As attracted as I am to poststructural theories, they interest me only insofar as they clarify, however partially, the part language plays in constructing social reality, and hence the part teachers and students and researchers could play in reconstructing more equitable realities in classrooms, schools, neighborhoods, communities, towns, and cities, not to mention the boardrooms, courtrooms, and legislative chambers that in one way or another also influence research on educational policies and practices. If what we say and write matters, if what students say and write matters, if words constitute worldviews rather than simply state reality and thoughts, then poststructural theories are the only ones I know of that even broach the implications of that claim for research on literacy. If what we say and write implicates us, then it is worth our while to identify those poststructural notions that are the most likely to elucidate the discourses and discursive practices that construct realities so powerful that they seem like reality itself to most of us. With that end in mind, let me suggest three theoretical notions that seem to me especially promising for those of us who see practice as the legitimate site of educational reform and who therefore consider research on educational discursive practice to be one way for teachers to recover their right to conceptualize teaching and learning, and hence to reform education from within.

First, the poststructural notion of multiple and interdependent discourses means that the cultural hegemony in democratic societies (as opposed to the seemingly absolute hegemony of physical violence, or the threat of it, in police-driven states) is contingent upon the struggle for domination among discourses. If people learn not one but several discourses along with whatever languages they learn, then absolute discursive hegemony is frustrated in principle, though not necessarily in individual practice. We have all heard stories about doctors who refuse to acknowledge patients as anything other than diseases and illnesses (a discursive practice presumably rooted in an absolute commitment to science as a discourse); we know stories about lawyers who transform all topics into legal arguments (a commitment to the power of law over all other discourses); and we even tell stories about teachers who see everyone as their students and treat every topic as an opportunity to lecture. Most, if not all, of us have been unfortunate enough to have had practical as well as theoretical experience of being on the wrong end of such single-minded and frustrating discursive practices, not to mention under the institutional authority of such boorish absolutists.

I think the notion of interdependent discourses provides at least a preliminary explanation of why we abhor such practices. It is not just that there is something perverse about the refusal to acknowledge constructions of people and events offered by other discourses, but that such exclusionary practices make a mockery of speech itself. I can see little point in talking to people who insist that law or science or art or education or religion/ethics has purchased the exclusive rights to reality. If we imagine discourses to be interdependent ideologies or worldviews, then some of the marvelous complexities of texts may be attributed to competing influences of discourses on writers' discursive practice, as seems to be the case in many academic texts (Brodkey &

Henry, in press; Brodkey, 1987a). And it may also be the case that the unwanted simplicity of some student-written texts could be attributed to their very lack of multiple discursive influences. A good many of the undergraduates I teach, for instance, tend to state their claims about social problems in terms that I attribute to religion. Given that the University of Texas is a research institution, that is, one in which science has considerably more sway than religion, and given that students are often posing problems such as abortion in terms of legislation, claiming that abortion is a sin is tantamount to declaring there to be nothing to talk about, nothing to argue, for sin moots the relevance of claims and arguments owing to either medicine or law.

Second, and much more complicated, each discourse offers not only a worldview but an array of subject positions that I have discussed elsewhere (1989a) as representing people in terms ranging from mostly satisfying or positive to mostly unsatisfying or negative. If we think of medicine as a discursive practice grounded in scientific discourse, it would be more satisfying to be the doctor than the patient, at least when medicine is being spoken and practiced. In addition to the obvious material fact that being a healthy person is simply better than being an unhealthy one, it is also better to be the knowing rather than unknowing subject of medical practice, or of any discursive practice for that matter. Some doctors' practices at least resemble educational discursive practices, insofar as they try to treat patients as students, teaching their diagnoses and encouraging rather than discouraging their questions.

I see in this and other such mundane instances of interdependent discursive practices and in the shifting of subject positions the promise of poststructural discourse theory for research. In principle, a discourse is attractive because its worldview and subject positions defend us against our experience of being at odds with ourselves, others, and the world. Discourse is said to unify the self divided during infancy in the moment when the child first looks in a mirror and recognizes itself as at once in the mirror and separate from its mother.

Earlier I presented the psychoanalytic version as a story about the individual quest for a unified self, but Foucauldian versions of the narrative are concerned not with the internal, emotional reality but with the struggle to come to terms with external social and political alienation by way of discursive practices. We might say that Foucault revises Lacan's romance as a novel, for novels, albeit some more explicitly than others, narrate social and political conflicts between the individual and society (Balibar & Macherey, 1981). I am not sure how far I can take, or even want to take, this conceit, but I think it important to distinguish the multiply-determined human subject in Foucault's work from the singly-determined human subject in Lacan's.

Lacan talks about an invariably traumatic process determined by a single psychological event, the separation of the unconscious from the conscious. Foucault, however, talks about the discourses that have historically determined certain human behaviors (hence, certain humans) to be dangerous to the state. At least as I understand his work on the power of discourse, particularly on sexuality, criminality, and insanity, Foucault (1973, 1979, 1980) is trying to document the conjunction of science and law in the construction and isolation of a set of human behaviors and of humans as subject to the joint authority of medicine and the state. This discursive practice marks, he argues, the onset of modernism as the hegemony of science and law in the modern state over what counts as "deviance" and what happens to "deviants." Foucault contrasts the interdependency of science and law in the modern era to times when deviants would have been subject to the joint authority of the church and the family; that is, when the authority of discourses I call religion and education held sway over both the human imagination and human social life. This shift in the authority and hence the cultural hegemony of science and law over religion and education is, according to Foucault, relatively recent.

The Foucauldian poststructural project is to demystify the power of discourse in order to better understand the discursive practices that construct our sense of self, other, and reality. The narrative that I have produced from Foucault's considerably more complex arguments on discourse and discursive practice suits me, because I am fascinated not only by the possibilities of socially constructed political reality, but by the possibility of teachers and students reconstructing themselves in relation to political realities via discursive practices that resist those representations that demean them and their labor. I am talking about devising ways for teachers and students and researchers to "interrupt" those discursive practices that, for one reason or another, appear counterproductive to teaching and learning.

I see most of my work as asking first myself and then readers, "What's wrong with this picture?" I see that as a matter of interrupting, rather than disrupting, the ongoing representation of self and other in theory, research, and practice. My questions depend on imagining people to be representing self, other, and reality in spoken and written text, and my answers depend on reading their texts as articulating their discursive intentions. I see student or teacher discursive practices that interrupt negative articulations of the self as renewing the possibility of conducting research on resistance. Shifting subject positions within or across discourses is possible, in practice, because the theory posits discourses that are interdependent and a range of subject positions. Refusing to articulate a negative version of the self and articulating a positive one in its stead may well be resistance. Countering a negative discursive representation with a positive one is a practical as well as theoretical distinction we might make between resisting (interrupting a discursive practice) and rebelling (disrupting a discursive practice). The civil rights movement probably contains many examples of discursive resistance, along with instances of rebellion, as does the women's movement and the fundamentalist religious movement. Articulation was the principle behind my analysis of resistance in "On the Subjects of Class and Gender" (1989a), and it could also be used to study any of the situations in which the articulation of the subjectivity of students and teachers is at issue.

I look back on "Tropics of Literacy" as my first effort to locate the devastating consequences of blithely articulating an alienated and alienating subject by "othering," a process by which we "stipulate the political as well as cultural terms on which the 'literate' wish to live with the 'illiterate' by defining what is meant by reading and writing" (Brodkey, 1986, p. 47). From where I stand, *Cultural Literacy* (Hirsch, 1987) simply amplifies this negative articulation by confounding cultural hegemony and cultural consensus. Or to put it another way, cultural literacy is an inverted Lacanian romance in which Hirsch projects onto others a desire to be Hirsch (the father), which ignores, among other things, the ways in which the project conflates the institutional authority of a Hirsch with the knowledge of the father. A Foucauldian reading would more fully recognize the dictionary as Hirsch's attempt to pass off cultural hegemony as cultural consensus. Consider the definition of *AC/DC* as "alternating current/direct current" (Hirsch, 1987, p. 152). This not only represents a consensus among those who know enough and make enough to take adapters when they travel abroad, but also represents a hegemony of heterosexuality over homosexuality. For surely Hirsch must know that in some circles the first meaning of *AC/DC* does not refer to electricity. In presuming that what cultural illiterates lack is the literacy of the lawyers surveyed to compile the dictionary, Hirsch has rewritten the Lacanian romance of the individual's psychic trauma as a cultural romance in which illiterates desire, as Lacan would have it, the language of the "father." Perhaps cultural literacy is the same middle-class fantasy that Eagleton (1983) argues underlies his literary theory, that is, an expression of Hirsch's desire to maintain the value of the canonical texts, to which he has since added the dictionary, that he possesses.

I think that the situations we find ourselves in as teachers and researchers are more like novels than romances, more Foucauldian than Lacanian, which is to say that we are in a position to represent literates and literacies alike as more complex and positive human subjects than either those I encountered in *Cultural Literacy* or those I lamented in "Tropics of Literacy." And I think we are more likely to do that if we can learn to read (articulate) what students write not only as so much formal evidence of their illiteracy, but also as evidence of a struggle to represent themselves and others in their claims about reality. I see the analysis of the discursive representations and articulations of self and other in "On the Subjects of Class and Gender" as an effort on my part to learn to "read" anew.

Third, in theory, a discourse represents all humans as subjects. In practice, however, some humans consistently fare worse than others across discourses, for some are commonly represented as diminished or objectified human subjects. That is to say that historically, they have been "othered" as unknowing and/or unknowable subjects in science, art, law, education, and religion or ethics. This is a serious limitation of poststructural theory, which is primarily a macro theory of discourse and discursive representation and only secondarily concerned with the micro concerns of applied theory which deals, or should, with both the positive and negative material consequences of discursive practices in institutional settings. It is a limitation that can only be dealt with, however, by acknowledging that educational research advocates a politics of education along with its problems, methods, analyses, and conclusions, and by assuming responsibility for the educational realities (change is not possible/change is possible, change is needed/ not needed, students can read/can't, can write/ can't, teachers can teach/can't, parents should help/should leave teachers alone, the state should intervene/shouldn't under any circumstances) advocated by research.

Discursive practices that diminish human subjectivity reduce the possibility of imagining people as agents of their own lives, let alone as agents of social change. Such systematic, negative discursive practices have radically differential effects on people, depending on the authority of the discourse. It seems to make little difference to me, for instance, that in most religious discursive practices I occupy the negative subject position, that of the nonbeliever or heathen or infidel. That is because I am not Salman Rushdie, not a citizen of Iran, not a believer, not a threat to believers or threatened by them. The discursive practices that most immediately affect me are, of course, those having to do specifically with women, and so I resist negative representations of women as victims or reproductive organs whenever I can, because I can and because the penalties are social rather than legal. Were I living in some other parts of the world, I would probably have to consider whether verbal dissent is worth the penalties leveled when the state brooks no opposition.

Even though I have witnessed some remarkable improvements in the representation of women as subjects, particularly in law and art, I see these improvements as uneven and materially more consequential to professional women like myself than to women generally. I am sorry to say that my most recent work suggests that even these changes have been less consequential to white, middle-class women than I thought. In the work Michelle Fine and I (1988) have done on sexual harassment narratives, for instance, women students at the University of Pennsylvania who were harassed by their professors did not describe the incidents themselves, but speculated instead on harassers' motives and/or institutional reprisals that would follow reporting the incidents. These narratives are important for a number of reasons, not least that they were written by some of the most privileged and well-educated women in the United States, who cannot be written off as lacking reading and writing skills, abilities, or competencies. Their unexpected failure to describe what happened to them seems to be linked to their inability to articulate themselves (as women) as the subjects of their own narratives.

The work I am now doing on the representation of difference in law (1989c) examines representations of women, particularly women of color, in Title VII suits and related legal documents. While I have only a preliminary analysis to report here, legal discursive practice looks very like that of the women students at the University of Pennsylvania. Consider the *amici curiae* brief (1989) submitted by the National Organization for Women and others to the Supreme Court in support of the Equal Employment Opportunity Commission's right to subpoena the tenure files of Rosalie Tung, who was denied tenure, and five recently tenured males in the Wharton School of Business at the University of Pennsylvania. NOW's critique of the university's argument on the privileges of academic freedom includes Tung's charge of sex discrimination, but relates Tung's charge of sexual harassment in the footnotes. I do not think the brief is bad legal logic. After all, the Supreme Court handed down a unanimous decision against the university's argument that confidential review is essential to the quality of faculty, which at least suggests that both the EEOC and the NOW briefs are instances of effective, legal discursive practice. Yet it is not clear to me why certain of Tung's interests (sexual harassment) are represented as marginal to the EEOC's in the brief, while others (discrimination) are central. I can think of reasons why the brief might not have included Tung's complaint against the chair of her department, but I imagine its inclusion in the notes belies its importance to Tung and clarifies the law's abiding interest in women's bodies only insofar as they are important to reproduction.

Despite discursive interdependence and multiple subjectivity, Toni Morrison and other African American women writers have probably done more to challenge negative representations of African American women and men in social science research—like Moynihan's scathing indictment of what he portrayed as the negative matriarchal structure in *The Negro Family: The Case for National Action* (1965)—than "scientific" rebuttals. Moynihan's argument on the power of the female descendants of slave communities, Hortense Spillers has argued, "is false because the female could not, in fact, claim her child, and false, once again because 'motherhood' is not perceived in the prevailing social climate as a legitimate procedure of cultural inheritance" (Spillers, 1987, p. 81). While I admire Spillers's argument as much as Morrison's critique in *Beloved* (1987), I suspect that artistic discursive practices, including those of Oprah Winfrey and Arsenio Hall, may have done a more effective job of transforming centuries of "self"-serving and reductive representations of African American women into positive and complicated ones than scholarly discursive practices based on science, law, education, and/or religion or ethics.

The poststructural narrative on human subjectivity is all the more attractive to me because of the possibilities for discursive resistance that are suggested in the notion of articulation. In much the same way that theorists argue that the unity of discourse is a necessary illusion, I view resistance or interruption as a necessary illusion for anyone who is different, if only because I simply cannot face the prospect of a world in which there is no point in talking, no reason to keep the conversation going. I need to believe that social change is possible and, further, that the possibility of shifting discursive positions and articulating positive representations of oneself is a more effective, more inclusive, and lasting form of political resistance than either silence or violence.

Adolescents who drop out or even graduate without learning how to write and read mostly do so in silence (Fine, 1987). But whether they leave quietly or create a brouhaha in the process, when they leave they lose the chance to interrupt the educational discursive practices that represent them as functionally illiterate or semi-literate (Fine, 1990). I can think of no more important project for teachers and researchers than studying classroom discursive practices in relation to the part they play in alienating students from literacy by failing to articulate their students' representations of themselves as subjects different from their teachers. That would mean, of course, taking the position that literacy begins not with reading but writing. Those who leave school illiterate learn not to resist but to circumvent the system, and no doubt some continue trying to circumvent the state. Law is a powerful discourse, however, and perhaps even the most powerful of the five. "Legal interpretation takes place," Robert Cover argues, "in a field of pain and death" (1986, p. 1601), and hence a legal sentence literally alters material reality for those it represents.

The view of discourses and discursive practices that I have been working out over the past few years sees those who rebel against the power of discourse with silence or violence as walking alone onto a field of pain and death. Cover pits legal interpretation against literary interpretation as an argument against a literary theory of the social construction of reality for law. But I do not see interpretation as the issue here. I see the conjunction of violence and the word in a legal interpretation as grounded in the powerful discursive hegemony of the state, which confers on judges the authority to reconstruct the lives of plaintiffs and defendants with words. Legal discursive practice may be an interpretive practice, but it is the authority of the state in the person of a judge that makes legal discursive practices (both legislation and interpretation) consequential. And the authority of the state in the person of the teacher makes educational discursive practices consequential.

Conclusion

It is an extraordinary privilege to live in a world where altering discursive practices has more to do with one's lived experience than with finding food and shelter or with constant vigilance against state violence. Not many people on the planet, not to mention in this country, live free from the kind of violence and pain Cover talks about; not many of those who do understand that the privilege is threatened when we condone rather than resist the inequities constructed by discursive practices. Women and people of color, for instance, may be better represented in legal documents than they are, for the most part, in legal discursive practice. That is to say, the 1964 Civil Rights Act makes it illegal to discriminate against people at work or school on the basis of sex or race. The history of civil rights cases during the 1980s, however, is a chronicle of legal discursive assaults on the EEOC's ability to investigate complaints of discrimination, let alone bring suits against employers.

The problems I write about in my work were on my mind long before I began reading poststructural theory and putting together a poststructural method for analyzing data. Poststructuralism is such an important theory that I wish I could claim that my work on literacy has been motivated by it. It has provided me with much that I need as a scholar, not least an intellectual position from which to view my own work and that of others. Yet I cannot hold this or any other formal theory responsible for my interest in literacy. Poststructuralism is not the only story about human life that interests me, but to the extent that poststructural theory narrates a story, it tells about the power of discourse(s) over the human imagination. I read the history of literacy as just such a story, for there is no narrative more powerful than the one that chronicles the shift from orality to literacy in modern democratic societies, and no narratives on that shift give us more to think about than those told from the vantage point of poststructural theories.

References

Aronowitz, S., & Giroux, H. (1985). *Education under siege: The conservative, liberal and radical debate over schooling*. South Hadley, MA: Bergin & Garvey.

Balibar, E., & Macherey, P. (1981). On literature as an ideological form. In R. Young (Ed.), *Untying the text: A post-structuralist reader*. Boston: Routledge & Kegan Paul.

Bell, D. (1987). *And we are not saved: The elusive quest for racial justice*. New York: Basic Books.

Brecht, B. (1965). *The mother*. L. Baxandall (Trans.). New York: Grove. (Original work performed 1932, published 1933).

Brief of *Amici Curiae*: NOW Legal and Education Defense Fund and Rosalie Tung et al. (1989). In the United States Supreme Court (88-493).

Brodkey, L. (1986). Tropics of literacy. *Journal of Education, 168*, 47–54.

Brodkey, L. (1987a). *Academic writing as social practice*. Philadelphia: Temple University Press.

Brodkey, L. (1987b). Modernism and the scene(s) of writing. *College English, 49*, 396–418.

Brodkey, L. (1987c). Writing critical ethnographic narratives. *Anthropology and Education Quarterly, 18*, 67–76.

Brodkey, L. (1987d). Writing ethnographic narratives. *Written Communication, 4,* 25–50.

Brodkey, L. (1989a). On the subjects of class and gender in "The literacy letters." *College English, 51,* 125–141.

Brodkey, L. (1989b). Opinion: Transvaluing difference. *College English, 51,* 597–601.

Brodkey, L. (1989c). *Writing and the politics of difference.* Unpublished manuscript, Rutgers University, New Jersey Center for Writing.

Brodkey, L., & Fine, M. (1988). Presence of mind in the absence of body. *Journal of Education, 170,* 84–99.

Brodkey, L., & Henry, J. (in press). Voice lessons. In S. Witte, R. Cherry, & N. Nakadate (Eds.), *A rhetoric of doing: Essays in honor of James L. Kinneavy.* Carbondale: Southern Illinois University Press.

Cover, R. M. (1986). Violence and the word. *Yale Law Journal, 95,* 1601–1629.

Eagleton, T. (1983). *Literary theory: An introduction.* Minneapolis: University of Minnesota Press.

Fine, M. (1987). Silencing in the public schools. *Language Arts, 64,* 157–174.

Fine, M. (1990). *"Framing" dropouts: Notes on the politics of an urban high school.* Albany: State University of New York Press.

Foucault, M. (1973). *Madness and civilization: A history of insanity in the Age of Reason.* New York: Vintage.

Foucault, M. (1979). *Discipline and punish: The birth of the prison.* New York: Vintage. Foucault, M. (1980). *The history of sexuality: Volume I. An introduction.* New York: Vintage.

Habermas, J. (1981). Modernity versus postmodernity. *New German Critique, 22,* 3–14.

Hall, S. (1986). On postmodernism and articulation. *Journal of Communication Inquiry, 10,* 45–60.

Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies, 14,* 575–599.

Harding, S. (1988). *The science question in feminism.* Ithaca, NY: Cornell University Press.

Heath, S. B. (1983). *Ways with words: Language, life, and work in communities and classrooms.* New York: Cambridge University Press.

Hirsch, E. D. (1987). *Cultural literacy: What every American needs to know.* Boston: Houghton Mifflin.

Horkheimer, M. (1972). *Critical theory: Selected essays.* New York: Seabury.

Horkheimer, M. (1974). *Critique of instrumental reason: Lectures and essays since the end of World War II.* New York: Seabury.

Kinneavy, J. L. (1971). *A theory of discourse: The aims of discourse.* New York: W. W. Norton.

Kuhn, T. S. (1977). Second thoughts on paradigms. In T. S. Kuhn, *The essential tension* (pp. 65–87). Chicago: University of Chicago Press.

Lacan, J. (1977). *Ecrits.* London: Tavistock Press.

Marcus, J. (1989). Afterword. In H. Z. Smith, *Not so quiet . . .* (pp. 241–300). New York: Feminist Press.

Morrison, T. (1987). *Beloved.* New York: Knopf.

Moynihan, D. P. (1965). *The negro family: The case for national action.* Washington, DC: U.S. Department of Labor.

Perelman, C., & Olbrechts-Tyteca, L. (1969). *The new rhetoric: A treatise on argumentation.* South Bend, IN: University of Notre Dame Press.

Spillers, H. (1987). Mama's baby, Papa's maybe: An American grammar book. *Diacritics, 17,* 65–81.

Toulmin, S. (1958). *The uses of argument.* Cambridge, England: Cambridge University Press.

U.S. Department of Labor, Office of the Secretary, Women's Bureau. (1983). *Time of change: 1983 handbook on women workers.* (Bulletin No. 298). Washington, DC: U.S. Government Printing Office.

16 Literacy Research and the Postmodern Turn: Cautions from the Margins

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This paper deals with theoretical advances and research approaches that have led to the development of what is now called "critical literacy"—the examination of the political and cultural assumptions underlying texts.

Critical literacy has grown out of an awareness that the ability to read and write in no way ensures that literate persons will achieve an accurate or "deep" political understanding of the world and their place within it. Indeed, the ability to read and write may well open entire groups of people to forms of domination and control through which their interests are subverted.

In this chapter, I will discuss a poststructuralist perspective on literacy research, a perspective that during the 1970s and 1980s challenged many educators to revise their conceptions of and approaches to literacy in order to understand the ideological role of literacy in the production and distribution of economic, political, and cultural power.

Critical literacy draws on the disciplines of Freirian/neo-Marxist, poststructuralist, social semiotic, reception theory, neopragmatic, deconstruction, critical hermeneutics, and other postmodernist perspectives. To stake out more firmly the theoretical position of the latter research practices, I shall briefly apply the methods of critical literacy to the methods of participatory research, critical ethnography, and action research.

Consistent with Bloome's and Bailey's focus on the "particulars" of a literacy event, critical research focuses on the influence of power on the sociopolitical context. It consistently asks the questions: Whose interests are being served in the social act of doing research? To what

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I would like to thank Henry Giroux, Dick Quantz, Steve Haymes, G. Honor Fagan, Martin O'Neill, and Adriana Hernandez for their reactions to an earlier draft of this paper and for their helpful comments.

degree are ethical and political issues as related to literacy taken into account? What principles do we choose in structuring our teaching? To avoid asking such questions is to risk having our services as educators enlisted in ways that serve the collective interests of the prevailing power structure. To assume a "centrist" position, by trying to reconcile competing perspectives in order to support those whose interests are preserved by the status quo, masks the cultural contradictions inherent in education.

Critical research therefore focuses on disjuncture, rupture, and contradiction. In order to examine these aspects, critical research examines knowledge as a form of discursive production. Discourses, as I am referring to them here, are conventions which to a significant extent govern what can be said, by what kinds of speakers, and for what types of imagined audiences (Brodkey, this collection; Weedon, 1987). Conventions are normative and derive their meaning from the power relations. For example, teachers assume the power to dictate the topic of discussion and to "hold the floor." Discourses, therefore, dictate the context of teachers conducting business or doing research. For example, research discourses embody particular interests, "establish paradigms, set limits, and construct [human] subjects" (Collins, 1989, p. 12) according to power interests.

Critical research examines how discourses reflect and shape the ways in which we consciously and unconsciously identify ourselves with our roles as researchers, and with the subjects we study. As Paulo Freire, Henry Giroux, Donald Macedo, Jim Berlin, Jim Gee, Linda Brodkey, Patricia Bizzell, and others argue, as researchers we need to assume that reality is constituted by an interactive, cultural, social, and historical process. Critical research, therefore, attempts to understand how the research design and process reflect social and institutional versions of power/knowledge relations.

As a researcher, I want to examine how postmodern social theory and poststructuralism in particular have influenced conceptions of the texts' authority, the role of the reader/writer, and the nature of literacy research. In doing so, I want to reformulate the concept of critical literacy (also see McLaren, in press; McLaren & Lankshear, in press; hooks, in press).

For educators, the debate surrounding literacy often centers on the role of institutions in shaping the way students understand the meaning and purpose of living in the world. In this debate the postmodernist challenges the liberal humanist notion of the individual student as a unified, fixed, and coherent essence. Rather, it conceives of persons as multiple, contradictory beings who reflect the breaks, disjunctions, and fissures of contemporary social reality. For example, students' versions of reality are shaped by the surging, ever-present impulsions of images produced by the media, resulting in an increasing alienation of youth brought about by what McRobbie (1986, p. 55) has called "the frenzied expansion of the media." A critical researcher therefore examines the sociocultural and political aspects of such popular cultural forms as music videos and multimedia advertising, in terms of how "meaning [within contemporary culture] has imploded due to our extensive exposure to mass culture" (Collins, 1989, p. 11).

All of this involves understanding the postmodern condition: an abandonment of the teleology of science, the construction of lifestyles out of consumer products and cultural bricolage, and the development of cultural forms of communication and social relations that have evolved from the disorganization of capitalism (Lash & Urry, 1987; McLaren, 1988; McLaren & Hammer, 1989; Giroux, 1988a, 1988b).

Within this world, adolescents face hybrid cultural pathways, all leading to the same place: nowhere. Nowhere is the place where youths reminiscent of those in *A Clockwork Orange* attempt to refigure the fragments of their scattered selves blanketed by an urban underclass, postindustrial haze (see Hebdige, 1988).

For others, the world in the postmodern condition is a state of disintegration and unified decay, one which, to borrow from Frank Lentricchia (1988, pp. 83–84), leads to a "carceral dystopia of manipulation," a prison which stands as a counterrevolutionary image for a society of surveillance and manipulation. The postmodern condition raises the question: What does it mean to be living amid what Poster (1989, p. 122) has called, after Foucault, "the domain of the superpanopticon"—a state of postmodern surveillance in which corporate and state bureaucracies are able to monitor large populations using sophisticated electronic equipment.

Discourses in the Postmodernist World

Postmodernist perspectives in social theory have focused considerably on the role of discourses in shaping these political versions of reality. In contrast to poststructuralism, structuralism conceives of language as an arbitrary system of differences in which meaning is guaranteed by the linguistic system itself and by the values given to signifying practices within particular linguistic communities. That is, for structuralists, meaning is uncovered by discovering the code that explains how elements of a social text function together. Often, these codes are granted a transcendental status serving as privileged referents around which other meanings are positioned. Less deterministic, poststructuralism puts much more emphasis on meaning as a contested event, a terrain of struggle in which individuals take up often conflicting subject positions in relation to signifying practices. Meaning consists of more than signs operating in a context; it also includes a struggle over signifying practices which is eminently political and must include the relationships among discourse, power, and differences.

From the postmodernist position, all discourses are always saturated in power. As Jane Flax (1987, p. 624) puts it, "Postmodern discourses are all 'deconstructive' in that they seek to distance us from and make us skeptical about beliefs concerning truth, knowledge, power, the self, and language that are often taken for granted within and serve as legitimation for contemporary Western culture." She adds that postmodern thinking takes as its object of investigation issues such as "how to understand and (re)constitute the self, gender, knowledge, social relations, and culture without resorting to linear, teleological, hierarchical, holistic, or binary ways of thinking and being" (Flax, 1987, p. 639).

The feminist position on postmodernism is particularly challenging since subjectivity within feminist theory is largely regarded as discursive and constituted through language. However, language is considered not a "natural medium but rather . . . its very construction is based on presuppositions about gender that devalue women: the speaking or writing subject is constitutively masculine while the silent object is feminine" (Homans, 1986, p. xii).

Postmodernist social theory has also examined the discourses of Western societies as marked by the construction of the foundational "I." Enrique Dussel (1980) notes: "From the 'I conquer' applied to the Aztec and Inca world and all America, from the 'I enslave' applied to Africans sold for the gold and silver acquired at the cost of the death of Amerindians working in the depths of the earth, from the 'I vanquish' of the wars of India and China to the shameful 'opium war'—from this 'I' appears the Cartesian *ego cogito*" (p. 23).

The postmodernist position holds that knowledge does not constitute decoded transcriptions of "reality," separable into the grand postulates of Western thought and what is left over: the lesser, vulgar, popular, and massified knowledges of the "barbarians." For example, Derrida (1976) argues that perceptions are shaped by the metaphorical character of knowledge. He attacks the objectivism inherited from the tradition of sociology: that society can be reduced to a "metaphysics of presence," or an objective and coherent ensemble of conceptually formulated laws. And Derrida has uncovered the discrepancy between meaning and an author's assertion by rupturing the "logocentric" logic of identity (cf. Sarup, 1989, p. 57).

Postmodernist Social Theory: Obstacles from Within

While the development of a postmodernist discourse in social theory has brought important advances for the development of a critical literacy, many of these advances are freighted with dangers. I would like to enumerate a series of objections to the postmodernist turn in social theory, which have been given voice by both exponents of and antagonists to this approach to understanding the politics of representation and the constitution of self.

Failure to Recognize Diverse Paradigms

The first objection is that postmodernist discourse—as it has been clearly articulated by Lyotard and his followers—has exaggerated the break or rupture in contemporary society (Kellner, 1988, p. 267). Lyotard especially articulates the postmodern era as if it were a grand narrative—some form of periodizing and totalizing thought. Furthermore, notes Kellner, Lyotard tends to lump all "grand narratives" together, doing violence to the diversity of theoretical narratives in our culture, such as synchronic narratives, diachronic narratives, metanarratives, and narratives contained within macrosocial theory. Kellner (1988, p. 253) suggests that we should distinguish between "master narratives" that "attempt to subsume every particular, every specific viewpoint, and every key point into one totalizing theory (as in some versions of Marxism, feminism, Weber, etc.) from 'grand narratives' which attempt to tell a Big Story, such as the rise of capital, patriarchy, or the colonial subject." Rather than viewing postmodernity as a dramatic epistemological and political shift from the age of modernism, I believe it is better to follow Kellner in speaking of society as existing in a transitional state.

Failure to Develop a Critical Language of Public Life

The postmodern turn among the Left in the academy has, with minor exceptions, failed to develop a critical language able to speak directly to the contradictions and particularities of everyday life. To maintain the requisite complexity of its concepts and formulations, its language has paid a price in suggestive power. Undoubtedly, this has also been aggravated by "academic assimilation that neutralizes oppositional writing in a society that provides room for intellectual battles but little for the uses of theory as an ally of actual political resistance" (Merod, 1987, p. 186).

Politics has now taken on a strange, hybrid meaning among leftist social and political theorists within the academy, who vary enormously in their opinions and uses of postmodern criticism. On the one hand, critics such as Jameson warn against a simplistic, reductionistic view of the political (Jameson, 1982, p. 75). On the other hand, critics such as Jim Merod believe that much academic work that falls into the category of postmodern decidedly fails to move the reader "from the academic world of texts and interpretations to the vaster world of surveillance, technology, and material forces" (Merod, 1987, p. 284). Harsher antagonists, such as Robert Scholes, claim that deconstructivist criticism can move "political activism into a textual world where anarchy can become the establishment without threatening the actual seats of political and economic power" (Scholes, 1988, p. 284). It also sublimates political radicalism "into a textual radicalism that can happily theorize its own disconnection from unpleasant realities" (p. 284). In an interview with Stephanson (1988), Cornel West argues that some current Left allegiances satisfy "a pervasive need for left-academic intellectuals . . . for the professional respectability and rigor that displace political engagement and this-worldly involvement . . . [while] at the same time [providing] . . . an innocuous badge of radicalism" (Stephanson, 1988, p. 274). Unfortunately, these criticisms do not sufficiently recognize the potential of critical postmodernism to construct the basis for a language of solidarity with subordinate and marginalized groups.

Failure to Recognize Feminist Perspectives

Another major objection to postmodernist discourse comes from feminist theorists who forcefully have revealed why men, in particular, find the new gospel of postmodernism particularly compelling. Not the least of these reasons relates to the fact that such a theoretical conversion allows men to retain their privileged status as bearers of the Word. Sounding a major caution with respect to the enthusiastic reception postmodernist social theory has received both in Europe and North America, E. Ann Kaplan (1987, pp. 150–151) asks:

> Is it possible that the postmodernist discourse has been constructed by male theorists partly to mitigate the increasing dominance of feminist theory in intellectual discourse? Could the discourse also partly remedy the gap in male theory resulting from the end of an era in French intellectual life, marked by the literal deaths of several of the great 1960s theorists—Jacques Lacan, Louis Al-

> thusser, Roland Barthes, Michel Foucault? . . . What I am suggesting is that certain theorists are drawn to postmodernism (rather than struggling against it) precisely because it seems to render feminism obsolete—because it offers a relief from the recent concentration on feminist discourse.

Kaplan's sentiments are also reflected by Christian (1987, p. 55), whose critical assault on postmodernist discourse takes aim at the language of literary critical theory. Christian condemns this new language as one that "mystifies rather than clarifies our condition, making it possible for a few people who know that particular language to control the critical scene—that language surfaced, interestingly enough, just when the literature of peoples of color, of black women, of Latin Americans, of Africans began to move to 'the center.' "

Harstock (1989) is equally hard-hitting, sounding a deep-seated suspicion that just at a time in history when a great many groups are engaged in "nationalisms" which involve redefining them as marginalized "others," the academy begins to legitimize a critical theory of the "subject" which holds its agency in doubt, and which casts a general skepticism on the possibilities of a general theory that can describe the world and institute a quest for historical progress.

Sara Lennox (1987) tellingly asserts that the postmodern despair associated with the claim by Western white males that truth can never be known is "merely an inversion of Western arrogance" and a presumptuous assertion that because they are unable to define truth, it therefore doesn't exist (Mascia-Lees, Sharpe, & Cohen, 1989, p. 15). Mascia-Lees, Sharpe, and Cohen (1989) have marshaled a concerted attack on the recent postmodern turn in anthropology, focusing their criticisms on "new anthropologists" George Marcus, Michael Fischer, and James Clifford. One of the central concerns these feminist theorists raise is that white male social theorists have managed to transform postmodernist discourse into "the new academic territory on which this decades' battles for intellectual supremacy and jobs will be waged" (p. 16). Furthermore, they argue that the often atheoretical postmodernist discourse is decidedly less politically grounded than feminist discourse.

Claiming that the relationship between ethnographer and research subject "masks actual differences in power, knowledge, and structural mobility," they defend feminists from the charge that they exhibit a fear of getting to know the "other." Rather, feminists harbor a resistance to "being appropriated and literally spoken for by the dominant" (p. 25).

Mascia-Lees, Sharpe, and Cohen pose the following questions: "Once one articulates an epistemology of free play in which there is no inevitable relationship between signifier and signified, how is it possible to write an ethnography that has descriptive force? Once one has no metanarratives into which the experience of difference can be translated, how is it possible to write any ethnography?" (p. 31). These questions pose a basic challenge for critical literacy bent on engaging recent postmodernist perspectives in social theory. One of the answers, it seems, lies in the ongoing development of feminist discourse itself.

In resisting "the dangers inherent in a complete decentering of the historical and material" and in the task of "changing the power relationships that underlie women's oppression" (p. 27), feminism offers postmodernist discourse a way of dealing with contradictions that do not decenter their own categories of analysis, such that political reform is immobilized. That is, by revealing women's voicelessness and powerlessness through dominant conceptions of the subject, feminist discourse can move analysis away from the word and toward the world. As Giroux (1991) has noted, modernism, postmodernism, and feminism can be articulated in terms of the interconnections between their differences and the common ground they share for being mutually corrective. As such, all three discourses can be used in mutually informing ways to advance a new politics of literacy research.

For example, both feminist theory and poststructuralism have criticized educators for working within a discourse of critical rationalism that reifies the humanist subject—the rational, self-motivating, autonomous agent (read white, middle-class male)—as a subject of history, change, and resistance (Peters & Marshall, 1989). The feminist and poststructuralist positions maintain that what separates being "an individual" from being "a subject" is a linguistic membrane known as discourse. That is to say, discourses provide individuals with identifications that convert individuals into subjects. By contrast, the rationalist position associated with the modern Enlightenment rests on a "metaphysics of presence" which constitutes the individual as a noncontradictory, rational, self-fashioning, and autonomous being. It is, in a word, Descartes's fully conscious "I" immediately transparent to itself. It exhibits a logic of identity, inasmuch as it generates a logic of hierarchical opposition in which the self defines itself in opposition to the "other." In projecting the subject as unified, this position disguises and falsifies the multiplicitous disunity of experience (Butler, 1987).

Failure to Recognize the Reader as a Historical Entity

One of the important contributions of poststructuralist theory has been its revelation that texts need to be understood in their historical, political, and cultural contexts. No longer are readers forcibly subjected to textual authority that "insultingly invited readers to hug their chains, merge into empathetic harmony with their oppressors to the point where they befuddledly cease to recognize whether they are subject or object, worker, boss, or product" (Eagleton, 1986, p. 182). Tony Bennett (1986) cuts across the notion of the unique, unitary experience of reading by skillfully revealing how subjects approach a text with already coded perceptions of "reading formations," which are comprised of a set of discursive and textual determinations that organize and animate the practice of reading.

These reading formations, Bennett notes, may be shaped by social positionality (e.g., the role of class and gender relations in organizing reading practices); intertextual determinations (readers' experience of other texts); and culturally determined genre expectations (by the dominant codes that govern the popular text or by subcultural codes such as feminism, trade unionism, Marxism, moral majority thinking, etc.). Readers are thus placed in a position in which they can potentially refuse the subject position which the text "coaches" them to adopt.

Commenting satirically about the Reader's Liberation Movement and its fetishistic concern with consumer rights in reading, Eagleton (1986, p. 184) describes the dominant strategy of this movement as an "all-out *putsch* to topple the text altogether and install the victorious reading class in its place." Of course, reader power cannot, as Eagleton maintains, answer the question of what one has power over. For this reason Eagleton ridicules the ascendancy of reader-reception theory which transforms the act of reading into "creative enclaves, equivalent in some sense to workers' co-operatives within capitalism [in which] readers may hallucinate that they are actually writers, reshaping government handouts on the legitimacy of nuclear war into symbolist poems" (p. 184).

Eagleton's position is reflected in the observations of Holub (1984, p. 156), who notes: "There is no reason to believe . . . that the consumer of literature is any more stable than the volatile text." Reader-reception theory enables the text to be viewed as multiple while simultaneously denying the plurality of readers.

Of course, there is much to commend in this bold move to decenter the authorial discretion of the author and the reader's projection as a passive, acted-upon object. Yet the very act of desituating and dehistoricizing the reader, as we have seen in the poststructuralist project, actually brings it into line with the humanist position, since in both perspectives "the work's specious authority will derive from the illusion that it is not value-bound, not historically conditioned, not responsible . . . [its] authoritativeness will depend not on the making of its particular human source, but on the implicit denial that it comes from anywhere at all, or, that it is class couched" (Scully, 1988, p. 66).

With its preoccupation with the construction of meaning at the point of reception, reception theory fails to consider the ways in which privileged forms of representing experience come to serve as regimes of truth.

Some current "reader-response" pedagogy reduces the act of reading to the subjective act of the reader. This ignores the way in which textual authority is linked to larger economies of power and privilege in the wider social order. If the meaning of a text can be reduced to an "individual" interpretation, then the act of reading itself can be reduced to a fantasy of personal resolution. Furthermore, it smoothly sidesteps collective participation in social transformation. It can create an optimism that is strictly personal, removed from historical context. In this way the dominant culture is able to produce both the individualism and poverty of theory that it needs in order to exist untroubled by the threat of resistance.

Postmodernist discourse has faced the charge that its overdetermination of the subject through discourse renders the social agent as politically innocuous as the liberal humanist. Poststructuralists' formulation of the self as an effect of discourse assumes that human subjects have little or no control. Frank Lentricchia (1988, p. 100) calls this "a literary politics of freedom whose echoes of Nietzsche and his joyful deconstructionist progeny do not disguise its affiliation with the mainline tradition of aesthetic humanism, a politics much favored by many of our colleagues in literary study, who take not little pleasure from describing themselves as powerless. This is a literary politics that does not and never has answered the question: So what?"

And so, as Lentricchia (p. 101) laments, "Hating a world that we never made, wanting to transform it, we settle for a holiday from reality, a safely sealed space reserved for the expression of aesthetic anarchy, a long weekend that defuses the radical implications of our unhappiness."

In order to consider how these forms shape meaning, a critical literacy raises the following questions: To what extent do conventional literacy practices duplicate the ideologies embedded in literary texts and the already constructed reading formations of teachers and students? If reading formations are not always already fixed, how can educators help their students develop reading formations that will enable them to resist the authority of the dominative ideologies produced within required texts? The implications these questions raise for literacy research are profound.

Critical research needs to address a number of issues:

> How can we construct narratives of cultural difference that affirm and empower and that do not undercut the efforts of other social groups to win self-definition?
>
> In what way are our own discourses as literacy researchers disguised by self-interest and defined by the exclusion of the voices of others?
>
> In what ways must we rewrite the stories that guide our research and our interpretations of these stories in relation to shifting cultural boundaries and new political configurations?
>
> How can we redefine research practices so that they no longer describe the discourses and practices of white, Western males who are charged to speak on behalf of everyone else?
>
> How do we position the "other" in the semantic field of our research so that he or she does not become a "silent predicate" that gives birth to Western, patriarchal assumptions of what constitutes truth and justice?
>
> How can we avoid reconstituting the "other" in the language of a universal, global discourse (in this case, an uncritical acceptance of liberal humanism)?
>
> How can we refrain from keeping the "other" mute before the ideals of our own discourse?
>
> What is the best way through our research practices to restore the marginalized and disenfranchised to history?

To take one of these issues, the United States has not stressed the role of educators as one of intellectual leadership since its version of modernist pedagogy stresses a common-sense theory of the mind (Inden, 1989). In effect, such a pedagogy holds that most students are converted to the American way of life before entering school, and that, except in the most stubborn cases, the teacher need merely convey to students the information needed to live in a natural, rational universe of common-sense enlightenment whose social analogue is United States civic culture (Inden, 1989). Here educators confront the legacy left by the colonizer, especially in relation to minority populations in U.S. schools, where there are concealed attempts to integrate the oppressed into the moral imperatives of the ruling elite (McLaren, 1989; Giroux & McLaren, 1989). We have inherited a legacy from the Reagan years in which African Americans, Hispanics, and other groups are essentialized as either biologically or culturally deficient and treated as a species of outsiders.

The solution to this issue is not found in reducing the individual to "a dispersed, decentered network of libidinal attachments, emptied of ethical substance and psychical interiority, the ephemeral function of this and that act of consumption, media experience, sexual relationship, trend or fashion" (Eagleton, 1986, p. 145). This position strips the subject of the authorship of its own will, yet leaves nothing in its place but a passive subject always already determined by discourse. Here we must again acknowledge the feminist critique that raises the issue of whether women "can afford a sense of decentered self and a humbleness regarding the coherence and truth of their claims" (Nicholson, 1990). As DiStephano points out (1990), postmodernism depends on a notion of a decentered subjectivity, whereas feminism depends on a relatively unified notion of the social subject as "woman." Here I believe we should follow Eagleton and agree that "the subject of late capitalism . . . is neither simply the self-regulating synthetic agent posited by classical humanist ideology, nor merely a decentered network of desire, but a contradictory amalgam of the two" (1986, p. 145). Here, critical poststructuralist, neo-Marxist, and postmodern feminist discourses can work together in addressing these and other issues of literacy.

Poststructuralist Pedagogy versus Political Pedagogy

Eagleton has revealed how the discourse of modernism in the teaching of English constitutes both a moral technology and a particular mode of subjectivity. In his view, dominant forms of teaching English serve to create a bourgeois body/subject that values subjectivity *in itself*. This occurs through "particular set(s) of techniques and practices for the instilling of specific kinds of value, discipline, behavior and response in human subjects" (1986, pp. 96–97). What Eagleton so convincingly argues is that within liberal capitalist society, the lived experience of "grasping literature" occurs within a particular form of subjectivity which values freedom and creativity as ends in themselves, whereas the more important issue should be: freedom and creativity *for what?* It seems that one alternative to the modernist pedagogy decried by Eagleton would be a poststructuralist approach to teaching. But, as I will argue, both poststructuralist and humanist pedagogy reflect a resistance to theory. Whereas humanist pedagogy constructs a subject that is capable of creating meaning, poststructuralist pedagogy offers textuality as a truth that exists beyond ideology. According to Zavarzadeh (1989), humanism and poststructuralist pedagogies are both united against what he calls "political pedagogy" by privileging individual experience over theory through a "pedagogy of pleasure." Pleasure, in this case, becomes an experience for subverting political liberation and becomes a "relief" from the fixity of the social, rather than a form of emancipation that comes with seriously challenging existing social relations. The dominant logic is temporarily displaced in an illusion of freedom.

According to Zavarzadeh, poststructuralist pedagogy concerns itself with the "how" or "manner" of knowing whereas humanist pedagogy generally concerns itself with the "what" of knowing (e.g., the canon, great books). But neither of these approaches deals with the "why" or the "politics" of representation.

At their best, poststructuralist and humanist pedagogies address how a given discourse is *legitimated*, but they avoid asking about its *legitimacy*; this is embedded in the prevailing economics of power. The pedagogy of poststructuralism is a pedagogy of pleasure. It is about using "laughter," "parody," "pastiche," and "play" as strategies of subversion which, while they decenter bourgeois relations, do not fundamentally transform them.

Against such strategies, radical pedagogy does not simply bracket reality but radically restructures it, dismantling secured beliefs and interrogating social practices and the constituents of experience while foregrounding and rendering visible the power/knowledge relation between the teacher and the student. In the radical classroom, students are "made aware of how they are the sites through which structures of social conflicts produce meanings" (Zavarzadeh, 1989, p. 66). In this instance, theory becomes posited as a form of resistance, as a means of understanding how cultural practices transform the actual into the real.

Research on Critical Literacy

Research on critical literacy has examined the various ways in which ideological production occurs, especially the way in which subjective formations are produced on a level often referred to as "common sense." Common sense or "practical consciousness" is most commonly manufactured at the level of language production and language use. A critical literacy must be able to account for the "mutual intelligibility of acts and of discourse, achieved in and through language" (Thompson, 1986, p. 116). Furthermore, critical literacy research needs to be able to identify the characteristics of an individual's "ethnomethods"—

the routine actions, unconscious knowledge, and cultural memory from which community members draw in order to engage in a politics of daily living. This entails developing participatory field approaches that can engage, interpret, and appropriate such knowledge.

Correspondingly, critical literacy research needs to approach the process of becoming literate as something more than becoming rational. It must understand literacy as the means by which reality is constructed according to truth, beauty, justice, and virtue, given the *social habitus* of society and the means by which society is able to reproduce and manage its symbolic and emotional economies. In this way, the literacy researcher needs to disrupt unconscious routines rather than simply report them and bring into relief the politics which inhere in the dialectics of daily life and struggle.

Literacy researchers must take an oppositional stance toward privileged groups within the dominant culture who have attained a disproportionately large share of resources, who are ceaselessly driven by self-perpetuating ideologies, and who are able to incapacitate opposition by marginalizing and defaming counter-discourses while legitimating their own. To accomplish this means understanding the production of subjectivity as something more than simply an ensemble of sliding, shifting signifiers constructed against a hyperrealistic backdrop of simulated meanings devoid of origins. Rather, it means grappling with the complex relationship between power and knowledge and how this works to affirm the interests of certain privileged groups against others.

Critical literacy researchers need to clarify groups' and individuals' historical experience of oppression and subjugation and to connect individual narratives of specific instances of oppression to an even larger historical framework in order to recover social memory and an awareness of the struggle of other groups (see Harrison, 1985). Histories of survival and resistance must be recalled and efforts made to clarify "how the structural interaction among dynamics of oppression have differently affected the lives and perceptions of our own group and others" (Harrison, 1985, p. 250).

In establishing the groundwork for a critical literacy, however, poststructuralism's tendency to privilege the experience of the particular over the theoretical should be avoided. It should be remembered that experience is not something that speaks for itself, but is an understanding constructed as a particular interpretation over time of a specific concrete engagement with the world of symbols, social practices, and cultural forms. How we think and talk about our world through the particular language of theory largely shapes our understanding of our experiences. All our experiences are held accountable within a particular system of interpretation; they are not free of political, economic, social, and linguistic constraints (Morton & Zavarzadeh, 1988). Individual and group experiences should be taken seriously because these constitute the voices students bring with them into the classroom. However, they should not simply be unqualifiedly celebrated. Rather, it is important to understand how both the voices (experiences) of the students and teacher have been subject to historical and cultural constraints which help shape their identities.

Let me be more specific. I believe that the primary referent for the empowerment of dispossessed groups should not be their moral, ethnic, gender, or political strangeness or displacement outside the boundaries of the dominant and familiar, but rather the establishment of criteria that can distinguish claims of moral, ethnic, gender, or political superiority which we exercise as outsiders. That is, the "other" has a hermeneutical privilege in naming the issues before them and in developing an analysis of their situation appropriate to their context (cf. Milhevc, 1989). How our research subjects name experience and place labels on their sense of reality should be the primary element that informs our research. The marginalized have the first right to name reality, to articulate how social reality functions, and to decide how the issues are to be organized and defined (Milhevc, 1989). Welsh (1985, p. 83) writes that "it is oppressive to free people if their own history and culture do not serve as the primary sources of the definition of their freedom." She warns that "the temptation to define others' hopes for liberation must be avoided" (p. 83). Furthermore, Welsh argues that "a concept of freedom is most effective as it is rooted in the imagination of the people to be freed, if it does indeed speak to something in their experience and their history" (p. 83).

Critical literacy researchers should remember, however, that the experiences of those with whom we study should never be considered self-evident, since experience is always the seat of ideology and not a state of unmediated innocence. Literacy researchers need to help students understand the literalness of their reality, the context in which such a reality is articulated, and how their experiences are imbricated in contradictory, complex, and changing vectors of power.

To be literate in a Hispanic community in eastern Los Angeles might reflect qualitatively different implications for a Hispanic community in upscale Manhattan than it would for an African American or Italian community living in Smith Hill, Rhode Island. In a related sense, to be a minority woman in a minority culture or a woman in the dominant culture also carries profound implications for what we want to define as literacy. The notion of being literate must additionally take into account the insight from poststructuralism which asserts that every individual consists of an ensemble of multiple, shifting subject positions. This means that individuals can acquire knowledge from a variety of subject positions and a number of theoretical perspectives. And, of course, many of these positions can be articulated as positions of resistance to the dominant discourse on literacy which labels them illiterate or semi-literate.

A critical literacy is, therefore, one in which the personal is always understood as social, and the social is always historicized to reveal how the subject has been produced in particular. Subjectivity is understood, therefore, as a field of relations forged within a grid of power and ethics, knowledge and power. It is worth emphasizing that a celebration of difference without investigating the ways in which difference becomes constituted in oppressive asymmetrical relations of power often betrays a simpleminded romanticism and exoticization of the "other" (Giroux, 1988a). A similar problem exists within poststructuralist research approaches, which proclaim the researcher to be the "other" so that self-reflection becomes a conversation with oneself rather than a dialogue with others.

To create research practices that do not fall prey to a mere liberal pluralism, literacy researchers need to develop a theoretical approach that questions "the nature of the alterity from which it enunciates" (Yudice, 1989, p. 226). Within pluralism, demands by the oppressed for social justice often are treated as threats to diversity. Pluralism also fosters an anti-intellectualism in which liberals can avoid being called upon to defend their positions (Harrison, 1985, pp. 244–245). As Mohan (1989, p. 151) notes, pluralism leaves "open the possibility of saying everything and 'saving' everything—even especially the subversive and the new."

To further avoid falling into a laissez-faire pluralism, literacy researchers must develop a more detailed account of what Fraser (1989, p. 182) calls "interpretive justification" of people's needs. This means examining the inclusivity and exclusivity of rival interpretations, and analyzing the hierarchy and egalitarianism of the relations among the rivals who are engaged in debating such needs. Fraser maintains that consequences should also be taken into consideration by comparing alternative distributive outcomes of rival interpretations.

This should take the form of procedural considerations concerning the social processes by which various competing interpretations are generated. Fraser elaborates:

> [W]ould widespread acceptance of some given interpretation of a

> social need disadvantage some groups of people vis-a-vis others? Does the interpretation conform to, rather than challenge, societal patterns of dominance and subordination? Are rival chains of in-order-to relations to which competing need interpretations belong more or less respectful, as opposed to transgressive, of ideological boundaries that delimit "separate spheres" and thereby rationalize inequality?

Critical research on literacy, therefore, does more than simply celebrate the infinite play of textual inscription or discover "double readings" in literary texts.

Addressing the antecedents and implications of new social theory in connection with formulating new advances in critical literacy research will mean a searching reevaluation of the Western metaphysical tradition, not a spurious rejection of it. The truths that modernity so arduously struggled to justify, either within an objectivist world or upon transcendental grounds, should certainly be granted a provisional status, but it is incautious and politically imprudent to abandon them outright.

In its critique of mainstream research, critical poststructuralist research does not argue that empirical verifiability or evidential supports are not important, but rather stresses the contingency of the social rather than "higher" forms of objectivity, the primacy of the discursive rather than the search for epistemological foundations, the transgression of the social as distinct from its positivity, the splintering of the social mundane rather than scrutinizing the adequacy of evidential claims.

Literacy researchers need to rethink and extend the notion of literacy to include "forms of linguistic experience that are peculiar to the twentieth century, and in particular the structures of domination they contain" (Poster, 1989, p. 132). This means a greater awareness of the development of a new mode of information that "designates the way symbols are used to communicate meanings and to constitute subjects" (Poster, 1989, p. 131). In other words, literacy educators need to raise the following questions recently posed by Poster (1989, p. 129):

> What happens in society when the boundaries of linguistic experience are drastically transformed? How are social relations altered when language is no longer limited to face-to-face speech or to writing? What assumptions about the nature of society need to be revised when the already complex and ambiguous aspects of language are supplemented by electronic mediation?

Critical literacy researchers need to examine the exteriority of the other. This involves studying how readers and writers establish a commitment to hear the voice of the other and enter into a relation with that other, creating a sense of separation and distinction—what I would call "otherness." Consideration of "otherness" is grounded in ethical respect for the person and culminates in the act of risking one's life.

We must continue to seek multiple discourses (e.g., African American pedagogy, Marxist pedagogy, feminist pedagogy) that mutually enhance the political project of each, but such nontotalizing alternatives to liberal humanist discourse must not reject the dream of totality outright. While there may be a number of public spheres from which to wage an oppositional politics, and while the micropolitical interests of groups that fleck the horizon of the postmodern scene may have overwhelmingly separate and distinct agendas, I believe that we should—all of us—work together in a search for *totality* to which we can all aspire.

The real challenge of postmodernity is to steer an ethical/political course in times of shifting theoretical borders and unstable systems of meaning and representation. We need, in Harstock's (1989, p. 172) terms, to build "an account of the world as seen from the margins, an account which can expose the falseness of the view from the top and can transform the margins as well as the center."

We need to respond to the challenge of postmodernism not by wishing ourselves back to the halcyon days of the male subject's quest for total control of his subjectivity, but rather a return to a renewed sense of our own obligation to the other.

Before we raise the epistemological question "Who are you?" we must first raise the ethical question "Where are you?" We must, in the final analysis, reject any notion of the human subject that seals itself off from its own history, its own link to the community of multiple selves which surrounds it, its narratives of freedom. To construct a truly critical literacy, we need to make despair politically unacceptable and human emancipation and liberation pedagogically conceivable.

References

Bennett, T. (1986). Texts in history: The determinations of readings and their texts. In D. Attridge & G. Bennington (Eds.), *Poststructuralism and the question of history* (pp. 63–81). Cambridge, England: Cambridge University Press.

Butler, J. P. (1987). *Subjects of desire: Hegelian reflections in twentieth-century France*. New York: Columbia University Press.

Christian, B. (1987). The race for theory. *Cultural Critique, 6*, 51–63.

Collins, J. (1989). *Uncommon cultures: Popular culture and post-modernism.* New York: Routledge.

Derrida, J. (1976). *Of grammatology.* G. Spivak (Trans.). Baltimore: Johns Hopkins University Press.

DiStephano, C. (1990). Dilemmas of difference: Feminism, modernity, and postmodernism. In L. J. Nicholson (Ed.), *Feminism/postmodernism* (pp. 63–82). New York: Routledge.

Dussel, E. (1980). *Philosophy of liberation.* Maryknoll, NY: Orbis.

Eagleton, T. (1986). *Against the grain.* London: Verso.

Flax, J. (1987). Postmodernism and gender relations in feminist theory. *Signs, 12,* 621–643.

Fraser, N. (1989). *Unruly practices.* Minneapolis: University of Minnesota Press.

Giroux, H. A. (1988a). Postmodernism and the discourse of educational criticism. *Journal of Education, 170* (3), 5–30.

Giroux, H. A. (1988b). Border pedagogy in the age of postmodernism. *Journal of Education, 170,* 162–181.

Giroux, H. A. (1991). Introduction. In H. A. Giroux (Ed.), *Modernism, postmodernism, and feminism: Rethinking the boundaries of educational discourse.* Albany: State University of New York Press.

Giroux, H. A., & McLaren, P. (1989). Schooling, cultural politics, and the struggle for democracy: Introduction. In H. A. Giroux & P. McLaren (Eds.), *Critical pedagogy, the state, and cultural struggle* (pp. xi–xxxv). Albany: State University of New York Press.

Harrison, W. (1985). *Making the connections.* Boston: Beacon.

Harstock, N. (1989). Foucault on power: A theory for women? In L. J. Nicholson (Ed.), *Feminism/postmodernism* (pp. 151–175). New York: Routledge.

Hebdige, D. (1988). *Hiding in the light: On images and things.* London: Routledge.

Holub, R. C. (1984). *Reception theory.* London: Methuen.

Homans, M. (1986). *Bearing the word: Language and female experience in nineteenth-century women's writing.* Chicago: University of Chicago Press.

hooks, b. (in press). bell hooks speaking about Paulo Freire: The man—his work. In P. McLaren & P. Leonard (Eds.), *Paulo Freire: A critical encounter.* New York: Routledge.

Inden, R. (1989). *America teaches the world order.* Paper delivered at the seminar Intellectuals and Social Action, University of North Carolina.

Jameson, F. (1982). Interview. *Diacritics, 12* (3), 72–91.

Kaplan, E. (1987). *Rocking around the clock: Music, television, postmodernism, and consumer culture.* New York: Methuen.

Kellner, D. (1988). Postmodernism as social theory: Some challenges and problems. *Theory, Culture and Society, 5* (2–3), 239–269.

Lash, S., & Urry, J. (1987). *The end of organized capitalism.* Madison: University of Wisconsin Press.

Lennox, S. (1987). *Anthropology and the politics of deconstruction.* Paper presented at the Ninth Annual Conference of the National Women's Studies Association, Atlanta.

Lentricchia, F. (1988). *Ariel and the police*. Madison: University of Wisconsin Press.

Mascia-Lees, F., Sharpe, P., & Cohen, C. B. (1989). The postmodernist turn in anthropology: Cautions from a feminist perspective. *Signs, 15*, 7–33.

McLaren, P. (1988). Culture or canon? Critical pedagogy and the politics of literacy. *Harvard Educational Review, 58*, 213–234.

McLaren, P. (1989). *Life in schools*. White Plains, NY: Longman. McLaren, P., & Hammer, R. (1989). *Educational Foundations*, No. 3, 29–62.

McLaren, P. (in press). Critical literacy and postcolonial praxis: A Freirian perspective. *College Literature*.

McLaren, P., & Lankshear, C. (in press). Critical literacy and the postmodern turn. In C. Lankshear & P. McLaren (Eds.), *Critical literacy: Politics, praxis, and the postmodern*. Albany: State University of New York Press.

McRobbie, A. (1986). Postmodernism and popular culture. *ICA Documents, 4*, 54–58.

Merod, J. (1987). *The political responsibility of the critic*. Ithaca, NY: Cornell University Press.

Milhevc, J. (1989). Interpreting the debt crisis. *The Ecumenist, 28*, 5–10.

Mohan, R. (1989). Review of *The political forms of modern society*, by C. Lefort. *Rethinking Marxism*, 2 (1), 141–157.

Morton, D., & Zavarzadeh, M. (1988). The cultural politics of the fiction workshop. *Cultural Critique*, No. 11, 155–173.

Nicholson, L. (1990). Introduction. In L. Nicholson (Ed.), *Feminism/postmodernism* (pp. xi–xii). London: Routledge.

Peters, M., & Marshall, J. (1989). *Education and empowerment: Postmodernism, humanism, and critiques of individualism*. Paper presented at the conference of the New Zealand Association for Research in Education, Central Institute of Technology, Wellington, New Zealand.

Poster, M. (1989). *Critical theory and poststructuralism*. Ithaca, NY: Cornell University Press.

Sarup, M. (1989). *Poststructuralism and postmodernism*. Athens: University of Georgia Press.

Scholes, R. (1988). Deconstruction and communication. *Critical Inquiry, 14*, 278–295.

Scully, J. (1988). *Line break*. Seattle: Bay.

Stephanson, A. (1988). Interview with Cornel West. In A. Ross (Ed.), *Universal abandon?* (pp. 269–286). Minneapolis: University of Minnesota Press.

Thompson, K. (1986). *Beliefs and ideology*. New York: Tavistock and Ellis Horwood.

Weedon, C. (1987). *Feminist practice and poststructuralist theory*. Oxford, England: Basil Blackwell.

Welsh, S. D. (1985). *Communities of resistance and solidarity*. Maryknoll, NY: Orbis.

Yudice, G. (1989). Marginality and the ethics of survival. In A. Ross (Ed.), *Universal abandon?* (pp. 214–236). Minneapolis: University of Minnesota Press.

Zavarzadeh, M. (1989). Theory as resistance. *Rethinking Marxism, 2,* 50–70.

IV Reaction Papers

17 Multiple Perspectives on Multiple Perspectives

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Pirsig (1974), in *Zen and the Art of Motorcycle Maintenance*, argues that consciousness is what each of us selects from awareness, and that

> Once we have the handful of sand, the world of which we are conscious, a process of discrimination goes to work on it. This is the knife. We divide the sand into parts. This and that. Here and there. Black and white. Now and then. The discrimination is the division of the conscious universe into parts. (p. 82)

Pirsig suggests that while there are different ways of understanding both the handful and the parts, the ways are irreconcilable with each other and that what is needed "is a way of looking at the world that does violence to neither" (p. 83). This can be accomplished by focusing "attention to the endless landscape from which the sand is taken" and seeing the "figure in the middle of it, sorting sand into piles" (p. 83).

Our sense is that the papers in this volume provide just such an opportunity. They allow us to explore the ways others select and analyze diverse handfuls from the literacy landscape. Heap (this collection), for example, argues that there are three ways of looking at what we call science: through the lenses of the natural scientist, the social scientist, or the cultural scientist. The lenses of each perspective look at natural phenomena in ways that are so different from one another that they are incompatible. Pirsig would agree and suggest that there are three different handfuls; extending Green's (this collection) iceberg metaphor (she argues that different methodologies are like different submarines, each approaching an iceberg from a different perspective), we might say the three groups are looking at different icebergs.

The three papers by Bloome and Bailey, Brodkey, and McLaren (all in this collection) do seem to assume the same reality/iceberg/handful (i.e., discourse is, at heart, a political phenomenon) but offer different methods of dividing the whole. Other commissioned papers for this volume (Cook-Gumperz & Gumperz; Hayes; Heap; Hunt & Vipond; Golden; Graesser, Magliano, & Tidwell; and Moll) illuminate (to again borrow Green's submarine/iceberg metaphor) the insights gained from their particular perspectives/parts/divisions. By understanding the landscape as seen from these ways of looking, we come to better understand and critique our own perspectives. Perhaps by seeing the figure in the middle of the landscape, sorting sand, we all move ourselves, each other, and the field a little closer to an understanding of literacy; perhaps we will all improve our capacity to use these transdisciplinary understandings. After all, as Heap suggests in Chapter 3, the fact that we share a common interest in improving literacy practice ensures the need for further dialogue.

Patterns in the Sand

Despite the diversity, despite the different perspectives, submarines, icebergs, and piles of sand, we sensed many commonalities and even some areas of agreement among the participants and papers at this conference.

1. *Participants seemed willing to accept, and perhaps even appreciate, the kinds of knowledge afforded by a diversity of perspectives.* It was not so long ago that literacy was considered the domain of particular fields of study and particular research methodologies. When new disciplines and new methodologies entered the literacy fray, interactions between researchers from the different methodological traditions were characterized more by debate than by dialogue. At this conference, we sensed a shift toward tolerance and respect. There still seems to be, and probably always will be, a tendency for all of us to privilege our own perspective. However, the conversations that occurred at this conference suggest that we may learn to value the contributions made by those researchers whose worldviews we will always quarrel with on a philosophical level. Perhaps literacy research will become transdisciplinary rather than multidisciplinary.

It is important to note that no one said or implied that each of us needs to incorporate the methodological tools of other paradigms. To the contrary, participants argued for "paradigmatic integrity" as a standard for research within any given perspective; that is, any piece of scholarship should adhere to the highest possible set of standards that its paradigm affords.

2. *We saw many tensions, both between and within paradigms, but they*

were the kind of tensions that drive inquiry rather than those that reify "sides" in hostile debates. The tensions, as we suggest, appear to be healthy, but they are legion. First, there are the methodological tensions; qualitative versus quantitative, emic versus etic, and descriptive versus prescriptive: these are classic players in the debate between experimental and ethological approaches to research, and each set was highlighted somewhere in the conference. But other methodological contrasts appeared as well. For example, Hunt and Vipond claimed that methods differ both in paradigmatic (the way we conduct the research) and rhetorical (the way we develop arguments to support points, hypotheses, or theories) features, but that we usually discuss only the paradigmatic differences (how to gather data, what counts as evidence, and the like). Their discovery that the rhetorical traditions of statistical inference and theories of individual behavior clouded their view of dialogical reading as a social phenomenon makes their point very dramatically. Another tension—one that we will discuss separately in more detail in our fourth pattern because it surfaced in so many presentations and discussions—focuses on whether a researcher seeks to illuminate the particular case or the general case in the quest for meaning or truth. In one instantiation, this tension transforms itself into a question of "How many cases are enough?" In another, into the question of purpose: "Is understanding or prediction the goal of the research?"

A whole set of implicit and explicit tensions about research and political power emerged from the dialogue. While we might have anticipated that the papers by Brodkey and McLaren, with their roots in critical theory, would contrast emancipation and oppression or under- and over-determinism, we were surprised to find political tensions throughout the conference and the papers—tensions such as dialogue versus exposition, conversation versus interrogation, description versus prescription, egalitarian versus elitist, and orthodoxy versus openness. As we explain more fully in the discussion of our fifth pattern, each contrast implies that research, even communication, is an inherently political enterprise. We came away from the conference with the realization that one cannot talk, one cannot even look, without privileging a particular voice or a particular point of view.

But the interesting point about the presence of all these tensions is that no one at the conference felt compelled to assume a rigid stance for or against any particular position. Perhaps the dialogical, even conversational, tone of the conference prevailed over the inclination toward philosophical consistency.

3. *We saw evidence of an even more expansive view of context.* It had

independently occurred to each of us that the course of literacy research over the last twenty years can be viewed as a search for increasingly global contexts into which the study of literacy can be situated; these papers reinforce that conclusion. From the perspective of experimental psychology, the methods of which surely dominated literacy research prior to 1970, the search can be viewed as beginning with research pioneers who claimed that letter and word identification was influenced by word (Miller, Bruner, & Postman, 1954) and sentence (Tulving & Gold, 1963) contexts respectively. Linguists, such as Chomsky (1959), and the early psycholinguistic contextualists (e.g., Miller & Isard, 1964; Gough, 1972) insisted that context worked in a hierarchical rather than a linear manner in language comprehension. In the 1960s and 1970s, the notion of context was expanded by other linguists (e.g., Grimes, 1975; Fillmore, 1968) to include text units larger than the sentence; these systems were quickly followed by the emergence in the mid-1970s of several text-analytic models of comprehension and recall in cognitive psychology (e.g., Meyer, 1975; Stein & Glenn, 1977). Context within cognitive psychology continued to expand to include reader knowledge, as expressed most vividly in schema theory (e.g., Anderson, 1977; Rumelhart & Ortony, 1977).

During this same time frame, context emerged as an important construct in psycholinguistic applications to reading (Smith, 1971; Goodman, 1967), the socio-semiotic tradition in linguistics (e.g., Halliday & Hasan, 1980), the communicative competence tradition in second-language learning (Krashen, 1985; Savignon, 1983), and sociolinguistics (e.g., Labov, 1972; Shuy, 1970). Each of these traditions brought to the literacy field a broader social, economic, and even political perspective on context.

As we enter the 1990s, what all fields seem to share is the conviction that context is more than a set of variables. Now context appears to be envisioned as a political, historical, cultural, and psychological construction that involves not only what has been and what is, but what is expected to be. This expansive conceptualization of context appeared both explicitly and implicitly in the papers presented at this conference. Both the concepts of intertextuality and particularism (what Heap has called situationism), for example, assume that context is diachronic and dynamic. This same sense of context is apparent in Bloome and Bailey's notion of an event and in Moll's sociocultural approach to community ethnography.

4. *We noticed a major shift from the general to the particular as the appropriate concern for research.* The great irony of research may be that the explicit search for generalizations will not yield any general-

izations worth keeping. Instead, it may be through a careful understanding of particular instances that we arrive at lasting understandings (some would call them truths). Bloome and Bailey make this claim explicitly and repeatedly. Heap puts a slightly different twist on the same issue when he argues that his cultural science approach, with its search for family resemblances rather than precisely defined classes, leads away from the natural science quest for an "essentialism" and toward a "situationism." Moll's entire notion of community ethnography assumes that it is the particular culture that must form the basis of a meaningful curriculum. And our sense is that it was the escape from the search for generalization and the quest to understand a particular phenomenon that finally permitted Hunt and Vipond to find their rabbit.

5. *People either assumed or commented on the fact that literacy, literacy instruction, and literacy research are inherently political endeavors.* There is a transparent sense in which all communication is political. If one views language as a set of speech acts, then it is inherently political; what I do and do not do (and say) is an attempt to influence what you do (and say). But we contend that literacy is political in a sense that goes beyond this everyday idea of politics. Literacy is political in the sense that to offer it or to withhold it or to study it is motivated by goals of personal gain or social control. Historically, for example, literacy has been viewed as both a tool of freedom ("know the truth, and the truth shall make you free," or "the pen is mightier than the sword") and a tool of oppression (yes, let's teach them to read, but let's make sure we provide them with only the best and most rewarding of literature once they can read). On a more subtle plane, issues of who is allowed into the literacy club within cultural traditions (white males? women? minorities?) is fundamentally a political question. Even more subtle is the question that Brodkey raises about the economic consequences of an inequitable distribution of literacy that leads to a much higher incidence of women and minorities living beneath the poverty line.

Implicit in most discussions at the conference was the underlying political nature of the venture we engaged in by holding the conference in the first place. Behind the eloquence and insight of each presentation lay the assumption that the power that comes with knowledge is somehow more acceptable and less oppressive than the power that comes with wealth, gender, or public office. One of the great paradoxes for academics who wish to support an emancipatory view of education is that their very right to express such a view stems from the fact that they occupy positions of authority. Only Brodkey explicitly dealt with the privileging of research and theory over practice. Only Moll presented us with an effort in which there was an explicit attempt to use theory and research to change political reality.

The political nature of literacy pervades most of its applications in school, research, and life. A basic issue is whether we deal with its political nature up front or let it lurk beneath the surface, or, as Brodkey suggested, whether politics "operate covertly rather than overtly in our programs, classrooms, and studies."

6. *We sensed a growing dissatisfaction with text as a construct.* Text did not fare well at this multidisciplinary conference. It was the proverbial whipping post for several other constructs with which it was freely and frequently contrasted. Text was contrasted with context by several speakers, with the assumption that context gave life to the text. Our sense was that most presenters reserved the term to refer to the document, that apparently "objective" thing out there on the pages of a book or the sound waves traveling through space. Bloome and Bailey contrasted it with Bakhtin's (and others', including Bloome's) notion of the intertext. For Bloome and Bailey intertext is a social construction, situated in events and acknowledged, at least implicitly by the participants, to account for the construction and/or interpretation of a text. For Brodkey, the contrast is between text and discourse, where the first is relatively neutral and the second intensely political. For Hunt (in his responses at the conference, not in the Hunt and Vipond chapter here), the contrast is between text and utterance, and the message is the same: the one is lifeless, the other, vital.

We're not sure whether the papers at this conference introduced a philosophical shift or simply chronicled the unintentional result of a set of semantic coincidences. It wasn't too long ago that schema theorists (e.g., Spiro, 1980; Collins, Brown, & Larkin, 1980) and reader-response theorists (e.g., Iser, 1978; Bleich, 1975; Rosenblatt, 1978) put forward the notion that readers, either individually or in a social transaction, construct the text. What has happened to this notion of text as a creation of readers? Has that concept died? Or did the speakers at this conference simply choose to define text as that inert epiphenomenon of ink and paper that some people think they see when they look at books or magazines. If so, were speakers also defining whatever text was contrasted with—context, intertext, discourse, or utterance—as the vital, meaningful entity that both the schema theorists and the reader-response theorists had in mind when they talked about readers constructing texts? We're not sure. But we feel confident that the issue will arise again, perhaps within a more broadly defined notion of intertextuality as the process of constructing meaning across multiple textual and contextual experiences (for studies with this goal in mind, see Hartman, 1990; Rowe, 1987; Short, 1986).

Common Ground

We liked the papers prepared for this conference. While we have focused on those prepared by the invited speakers, we also found many insights in those broad perspective pieces prepared by the conference organizers—Rick Beach, Judith Green, George Hillocks, Michael Kamil, and Tim Shanahan—as a way of providing a contextual setting for the conference.

We particularly appreciated those authors, best represented by Hayes, who gave us a flavor for the natural history of their approach to conducting research. There are too few opportunities for us to discuss with one another the phenomenological experience of doing research; we need more, especially as a part of the socialization process for new scholars. Hayes's paper brings us to our first "piece" of common ground—those ideas, principles, or commitments that we all share in spite of our obvious differences.

1. *We all experience research as narrative.* Those of us who write in the expository tradition associated with experimental psychology know that our research endeavor did not proceed with all the structure, intention, and deliberateness conveyed in the rhetorical tradition of the "research article." Instead, that effort was more likely a serendipitous progression of fits and starts, dead-ends, new starts, insights, guesses, and blind luck. But when some of us write about it, it appears as though we knew what we were doing at every step along the way. What makes Hayes's paper so engaging is the "story" of his efforts. Experimental efforts might benefit (we know readers of the efforts would) from more "story." Conversely, some interpretive or ethnographic texts might prove more helpful to readers if they revealed more explicitly the points, structures, and patterns identified by their authors.

2. *We all want to improve and extend literacy.* Heap said as much in his paper by observing the grave differences that separate us. Implicit in all of what we do is the hope that more students will read and write with greater personal insight, genuine concern for effective communication, and a critical stance toward all ideas. We thank Moll for making these hopes explicit in his example of how school, home, and community literacies can support one another.

3. *We recognize the need for other perspectives.* It is always easier to

engage in a dialogue with those with whom we share a worldview and a methodological framework; dialogue with those whose views and frameworks we may have openly rejected comes hard for all of us. This conference and this volume suggest that the most important dialogue may be with those with whom we disagree. Perhaps if we continue these conversations, we can accomplish collectively what none of us can accomplish individually—examining literacy from multiple perspectives. Tolerance, then, must be the ethical principle underlying all our work. Tolerance permits us to recognize, respect, learn from, and celebrate the diversity of perspectives that our literacy research community offers. This conference, this volume, point us in the right direction.

In *The Sea of Cortez* (1941), John Steinbeck chronicles the expedition that he and Doc Ricketts (of *Cannery Row* fame) took to examine the marine life in the Sea of Cortez (now the Gulf of California). In the introduction, he discusses the tensions between the approaches to the study of marine life taken by the laboratory biologist and the ethologist. Their resolution to these tensions provides yet another metaphor for the tolerance expressed at this conference, tolerance that might well foreshadow a genuine transdisciplinary approach to literacy research:

> We determined to go doubly open so that in the end we could, if we wished, describe the sierra thus: 'D.XVII-15-IX; A.II-15-IX; but also we could see the fish alive and swimming, feel it plunge against the lines, drag it threshing over the rail, and even finally eat it. And there is no reason why either approach should be inaccurate. Spine-count description need not suffer because another approach is also used. Perhaps out of the two approaches, we thought, there might emerge a picture more complete and even more accurate than either alone could produce. And so we went. (p. 174)

References

Anderson, R. C. (1977). The notion of schemata and the educational enterprise. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge* (pp. 415–431). Hillsdale, NJ: Lawrence Erlbaum.

Bleich, D. (1975). *Readings and feelings: An introduction to subjective criticism.* Urbana, IL: National Council of Teachers of English.

Chomsky, N. (1959). *Syntactic structures.* The Hague, the Netherlands: Mouton.

Collins, A., Brown, J. S., & Larkin, K. M. (1980). Inference in text understanding. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 285–407). Hillsdale, NJ: Lawrence Erlbaum.

Fillmore, C. (1968). The case for case. In E. Bach & R. Harms (Eds.), *Universals in linguistic theory* (pp. 1–88). New York: Holt, Rinehart and Winston.

Goodman, K. S. (1967). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist, 4,* 126–135.

Gough, P. (1972). One second of reading. In J. Kavanagh & I. Mattingly (Eds.), *Language by ear and by eye* (pp. 331–358). Cambridge, MA: MIT Press.

Grimes, J. E. (1975). *The thread of discourse*. The Hague, the Netherlands: Mouton.

Halliday, M. A. K., & Hasan, R. (1980). *Text and context*. Tokyo: Sophia University.

Hartman, D. (1990). Intertextuality and learning from text: Assessing the acquisition and assembly of content knowledge from multiple textual sources. Unpublished doctoral dissertation, University of Illinois.

Iser, W. (1978). *The act of reading*. Baltimore: Johns Hopkins University Press.

Krashen, S. (1985). *The input hypothesis: Issues and implications*. London: Longman.

Labov, W. (1972). *Sociolinguistic patterns*. Philadelphia: University of Pennsylvania Press.

Meyer, B. J. F. (1975). *The organization of prose and its effects on memory*. Amsterdam: North-Holland.

Miller, G. A., Bruner, J. S., & Postman, L. (1954). Familiarity of letter sequences and tachistoscopic identification. *Journal of General Psychology, 50,* 129–139.

Miller, G. A., & Isard, M. (1964). Free recall of self embedded English sentences. *Information and Control, 7,* 292–303.

Pirsig, R. M. (1974). *Zen and the art of motorcycle maintenance*. New York: Bantam.

Rosenblatt, L. M. (1978). *The reader, the text, the poem: The transactional theory of the literary work*. Carbondale: Southern Illinois University Press.

Rowe, D. W. (1987). Literacy in the child's world: Young children's explorations of alternate communication systems (Doctoral dissertation, Indiana University, 1986). *Dissertation Abstracts International, 47,* 4345-A.

Rumelhart, D. E., & Ortony, A. (1977). The representation of knowledge and memory. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge* (pp. 99–136). Hillsdale, NJ: Lawrence Erlbaum.

Savignon, S. (1983). *Communicative competence: Theory and classroom practice*. Reading, MA: Addison-Wesley.

Short, K. G. (1986). Literacy as a collaborative experience (Doctoral dissertation, Indiana University, 1986). *Dissertation Abstracts International, 47,* 1674-A.

Shuy, R. W. (1970). Subjective judgments in sociolinguistic analysis. Report of the twentieth annual roundtable meeting on linguistics and language studies. *Georgetown University Round Table on Languages and Linguistics, 20,* 175–188.

Smith, F. (1971). *Understanding reading*. New York: Holt, Rinehart and Winston.

Spiro, R. J. (1980). Constructive processes in prose comprehension and recall.

In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension* (pp. 245–278). Hillsdale, NJ: Lawrence Erlbaum.

Stein, N. L., & Glenn, C. G. (1977, March). *A developmental study of children's construction of stories.* Paper presented at the conference of the Society for Research in Child Development, New Orleans.

Steinbeck, J. (1941). *The Sea of Cortez.* New York: Viking.

Tulving, E., & Gold, C. (1963). Stimulus information and contextual information as determinants of tachistoscopic recognition of words. *Journal of Experimental Psychology, 66,* 319–327.

18 Intuition and Ideology: Exploring the Ecosystem

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In reflecting on the rather erratic progress of educational practice in the United States, Howard Gardner remarks:

> [P]eople—teachers of preschoolers no less than ministers of education—will continue to hold the major responsibility for developing other individuals. This trust they will exercise wisely or poorly, productively or counterproductively. That they should do so with some awareness of what they are doing, with some knowledge of the alternative methods and outcomes, would seem preferable to operating completely from intuition or wholly from ideology. (1985, p. 392)

The papers in this collection, the presenters at this conference, and the perspectives under consideration have much in common with Howard Gardner's administrators and practitioners: they operate delicately and precariously in the space between intuition and ideology. Maintaining this balance between the potential conformity of ideology and the potential chaos of intuition demands our conscious and continuous attention to the "alternative methods and outcomes" of research and practice that Gardner talks about.

It is this *awareness* of what we are doing that we seek in this conference and this collection of papers. Our discussion over the three days of the conference led us to consider, over and over again, the implications of ideology and the place of intuition in the inquiry process. It is fitting, indeed, that this discussion should begin at the start of a new decade.

Not surprisingly, since George Kelly is so influential to my particular perspective on literacy, what I learned in reading these papers came to me in the form of constructs, rather than universal truths or general precepts. As Kelly (1955) defines them, constructs are bipolar reference axes upon which we represent the phenomena around us. These bipolarities, it seems to me, are similar to the "dialectical tensions" that Bloome and Bailey (this collection) talk about, where one end of a construct always implies the other.

It is impossible, I have discovered, to talk about particularity without in some way bringing in the notion of universality. By the same token, discussions about realism always implicate notions of idealism, talk about "science" is always set within talk of politics, and "good guys" always conjure images of "bad guys" in a process of constantly shifting identities.

In my response to these papers, I am not going to try to reconcile, blur, blend, or obliterate any perspectives. Rather, I will try to tease out some points of departure and points of convergence, to examine the intersections, and to pull together some implications for research on language and literacy. I will try to catalogue and describe some of these simultaneously competing and compatible perspectives in the next few pages.

Perspectives on Perspectives: Paradigms and Persuasive Traditions

One important issue in this conference is the degree to which seemingly divergent perspectives cohere within the context of a larger research tradition. I was most interested in Judith Green's statement that there was only a 25 percent overlap in terminology in her synthesis of NIE projects, yet there seemed to be a great deal of overlap in basic concepts. Given that literacy researchers come from such disparate fields of inquiry this terminological fuzziness, or what Green calls the lack of a "common language" across perspectives, can be a particular problem.

In my own field of interest, I can think of terms like *transactionalism* being used to describe particular language purposes (Britton, 1984), the stances readers adopt while responding to texts (Rosenblatt, 1985), and an overriding theoretical framework for studying human beings (Dewey & Bentley, 1949).

In this collection we consider how much terminological discontinuity the field of literacy study can endure. Richard Beach (this collection) cautions that competing perspectives encompass contradictory assumptions about the nature of literacy and the role of context in the development of literate individuals.

When he contrasts paradigmatic and rhetorical traditions, John Hayes provides a useful starting point for considering these potential areas of divergence. Where paradigmatic traditions are a collection of rather loose and mutually incompatible schools of thought, the rhetorical traditions of a discipline constitute the glue of argumentative practices that holds this disparate array of beliefs and methods together. Presuming that there is, indeed, a developing rhetorical tradition in the field of literacy studies, a worthwhile task at this point in our history might be to examine some overriding aspects of this developing tradition. These initial points of agreement might render us more open to considering and learning from our respective differences (see "Divergence and Convergence" later in this chapter).

Perspectives on Inquiry: Openness and Closedness

Several papers have talked about the issue of where, or when, or how truth emerges, and how one pursues it. We read about the incompatibilities between natural and human science and physical and social science perspectives. George Hillocks contrasts realist and idealist perspectives, and distinguishes the notion of truth as reality from truth as social agreement. Linda Brodkey criticizes what she calls "naive empiricism," or the belief that researchers or research in general can be scientifically objective.

James Heap distinguishes between empirically knowable and a priori knowledge. He breaks this latter notion into whatever can be derived from sense, as opposed to whatever can be derived through ratiocination (here, it is the *as opposed to* that bothers me, as though sensory information could ever be created or apprehended apart from ratiocination, or vice versa).

These dichotomies are perhaps necessary fictions for opening a conversation about the nature of knowing. As Hillocks points out, extreme idealist or realist positions are "clearly untenable." What this conversation about knowing has yielded, it seems to me, is some understanding about the ramifications of particular research perspectives for the phenomenon under study.

For example, many of us have been heartened by the dramatic shift over the past several years toward the legitimization of qualitative inquiry. As Bloome and Bailey (this collection) point out, one benefit of this movement has been the empowerment of teachers and students alike. Fortunately, it is becoming more difficult for literacy researchers to remain in the laboratory. Our participation in the discourse practices of the classroom, workplace, and world gives us not only an enriched view of what we study, but potentially enriches the lives of those we study as well.

However, words like *empowerment* can be used rather haphazardly and indiscriminately. It is important, for instance, that good stories not be equated with sound and systematic inquiry practices. As Arthur Applebee (1987) has argued, "In the effort to legitimate the teacher as researcher, we have sometimes lost sight of the fact that teachers and researchers bring different perspectives and different expertise to the problems addressed in research—and it is this difference that makes collaboration potentially so productive" (p. 5).

A teacher I know came to me recently and said, "I'm tired of hearing all this business about 'teacher-as-researcher.' I've got enough to do in my classroom without becoming a researcher on top of everything! Maybe we ought to collapse the term *teacher-researcher* into *reacher*; after all, aren't all of us—teachers and researchers—engaged in the constant process of reaching for possible explanations of what happens?"

I would argue that indiscriminately elevating, validating, or canonizing the ordinary events of classrooms and the ratiocinative processes of researchers can be as dangerous as indiscriminately elevating the scientific objectivity of hypothesis-testing models. Instead, we might strive to keep our constructs open rather than closed, as Timothy Shanahan (this collection) suggests. There is much that each of us can learn from people who operate outside of our particular research perspective, but we may wisely choose not to combine qualitative and quantitative methods in our own research. We may also choose to engage in collaborations of research or practice without redefining our identities as researchers or practitioners in the process.

The traditional dichotomy of "objectivity and subjectivity," however, is at the heart of much controversy in the field of literacy studies. In her recent book, Evelyn Fox Keller (1985) cautions against conceptualizing science in terms of this dichotomy. Instead, she urges a different goal: "not prediction per se, but understanding; not the power to manipulate, but empowerment—the kind of power that results from an understanding of the world around us, that simultaneously reflects and affirms our connection to that world" (p. 166).

Keller's brand of empowerment—for literacy researchers, practitioners, and literate people alike—can only exist in that delicate balance of ideology and intuition. We might argue, in fact, that ideological and intuitive thought actually exist in a sort of ecosystem (hence, the title of this response), where neglect of one aspect is ultimately detrimental to the whole system.

Fortunately, there is no irresponsible or impersonal way to preserve this fragile ecosystem. It is through the constant process of shuttling between self and world that we hone our analytical powers and become truer and more responsive to our field of study. Our process then, is more art than science; each of us must arrive at this particular balance in our own way, recognizing all the while the impossibility of separating what we know from the context within which it is known. And in creating the artifacts of our inquiry, we continually define ourselves and our methods in the process.

Perspectives on the Purposes of Literacy Research: Inquiry and Argument

Several papers in this collection deal with our aims and purposes as literacy researchers and practitioners. There are tensions between research and policy perspectives, scientific and political perspectives. Bloome and Bailey tell us that every research effort is, at some level, political. Many of us have considered the interrelation of psychological and social perspectives on language. Linda Brodkey urges us to consider writing and reading as a set of discursive practices rather than a set of skills, thus recognizing the political dimensions of literacy. Luis Moll argues the impossibility of separating the individual and society in literacy research. Cook-Gumperz and Gumperz's notions of discourse versus grammar-based views of literacy also acknowledge the political and social nature of language. Hillocks tells us that new fields must face the task of legitimizing the methods and focuses of their efforts.

All of this seems like a modern-day extension of the Aristotelian argument that all language is persuasive in intent, regardless of whether we talk about the language of the classroom, the research journal, or the computer. Our aim, however, should not be to divorce findings and methods from their political implications, but to responsibly acknowledge those implications and, if need be, to openly work against them.

For example, much current scholarship in the area of classroom literacy stands as a liberationist critique of traditional schooling. Teachers are urged to give students absolutely open choice in the focus of their reading, writing, and oral language, to avoid discrimination on the basis of nonstandard usage, and so forth.

Such critiques are certainly important, given Moll's sobering finding of a "single-stranded" relationship between teachers who possess knowledge and students who receive knowledge. Similarly, Peter McLaren warns that most current educational practices constitute a form of colonization and domination, in which students are subordinated to the dominant culture. McLaren's notion of "critical literacy" is a laudable attempt to highlight the liberating aims of language study. However, even such obviously well-founded critiques must be constantly questioned. Pushing at the edges of political perspectives means speculating about the potential abuses of these or any "liberationist" positions.

It is conceivable that, at their extremes, such positions could constitute a tyranny of choice. When students feel incapable and paralyzed by absolute freedom, when teachers need to focus students' reading, writing, or oral language on particular texts or ideas for legitimate learning purposes, choice as an absolute ceases to be choice at all, but moves into the realm of rigid ideology. Empowerment is not always an artifact of unguided freedom and control. Nor do all students benefit from a situation of unrestrained choice.

Furthermore, as Lisa Delpit (1990) has argued, "while linguists have long proclaimed that no language variety is intrinsically 'better' than another, in a stratified society such as ours, language choices are not neutral. The language associated with the power structure—'standard English'—is the language of economic success, and all students have the right to schooling that gives them access to that language" (p. 265).

Before I run the risk of taking up the "back-to-basics" baton, I must clarify that I would rather see teachers err on the side of student choice and diversity than drift to an archaic position of teacher control. I do, however, believe that all political positions are inherently corruptible, susceptible to abuse by individuals who adopt them wholesale and secondhand. Pushing at the edges of our political positions means a constant vigilance and a refusal to accept any perspective as sacrosanct; the only absolute I would argue for is maintaining a constant stance of openness and flexibility where our political allegiances are concerned.

Perspectives on the Focuses of Inquiry: Particularity and Universality

A constant issue of this conference was how we choose our window or lens for the phenomenon under study. Dialectical oppositions such as universal and particular, essentialism versus particularism, have pervaded our discussions. Michael Kamil, for instance, tells us that research conducted in smaller pieces can account for an entire range of events, while David Bloome and Francis Bailey caution us to consider the consequences of parceling those events and failing to consider them within their historical context. Hunt and Vipond (this collection) urge us to catch, cut up, and make a stew out of our rabbit. Yet my question is, how can we talk about events at all when we are always part of those events. How we cut up those "smaller pieces" has implications for the stew we serve.

Another question concerns whether literacy research exists to explore questions or highlight events. Hunt and Vipond, citing Danziger, distinguish between hypothesis-testing and demonstration/staging models of research. It seems simplistic to ignore the fact that both purposes underlie every research effort. Even the most carefully controlled experiment, at some level, tells a story. On the other hand, one of the most compelling and attractive aspects of qualitative inquiry is the sense of identification that readers or hearers derive from narratives of practice. I argue that this identification process would be impossible, unless these narratives tied into some larger, more general themes. Without this larger relevance, qualitative studies would be nothing more than random and pointless narratives.

What is interesting to me is that people who talk about particulars are usually those among us who urge a rigorous examination of larger contexts and histories of classrooms and children, and literacy events. And I wonder, considering this irony, how far apart we really are.

Perhaps a better metaphor for our way of viewing the world is not a lens, but a kaleidoscope, where the array before us changes with every twist of the observer's hand. The historical and contextual medium within which we conduct our work is not the array itself, but the choice of procedures, the momentary configuration of events, and perhaps the light of analysis and insight that allows us to witness this particular configuration in the first place.

Perspectives on the Processes of Inquiry: Method and Theory

One of the greatest concerns of reading and literary response researchers seems to be our choice of materials and response-elicitation methods. The argument goes something like this: Whatever we put in front of readers, and however we ask them to articulate a response, ultimately shapes that response. Graesser, Magliano, and Tidwell (this collection) argue that because of their accessibility, explicit language features (i.e., letters, phonemes) have been the preferred objects of scrutiny in reading research, to the neglect of internal processes, such as inference generation and world knowledge. Similarly, Joanne Golden (this collection) argues the need to distinguish between a reader's private response and the public "text" of interpretation mediated by the influences of teachers and peers.

Hunt and Vipond stress the importance of not drawing conclusions about reading in its "natural" state (whatever that is) from studies of laboratory reading. The papers in this volume distinguish, for instance, between texts and textoids, naturalistic and controlled texts, everyday and laboratory reading, and literature and non-literature.

Recently, a spate of criticism has focused on the issue of literature versus non-literature, arguing that such definitions do not account for differences in texts, but differences in the ways in which readers approach those texts. Louise Rosenblatt (1978, 1985), for instance, envisions literary reading as aesthetic reading; Judith Langer (1989) has defined literary reading as "reaching toward a horizon" of interpretive possibilities. The continuing debate is evidence of a concern about how to study a process as messy and implicit as reading without in some way disrupting that process. I argue that we cannot make a stew out of Hunt and Vipond's rabbit, because once it is captured and cut up, however momentarily satisfying, it is not the quarry we have sought.

Considering the difficulty I have just described, I suggest that we need to embrace the messiness of what we do. Given the exploratory nature of much of our work, we need to consider findings of "no difference" alongside findings of statistical significance, and invest each with equal validity. We need also to ask "what happens" questions before we ask "what works" or "what's better" questions. Perhaps, if we are going to empower anything, we should empower our own uncertainty, for it is this uncertainty that keeps us continually searching and impervious to the perils of rigid ideology.

An important question, then, is how can we consider theories or methods or materials in isolation, when all of the papers in this collection show us just how intertwined are methods, materials, and theoretical perspectives, such that method often guarantees the existence and popularity of theory? One recurring theme of these papers is that methods indiscriminately or unreflectively used, or borrowed from incompatible theoretical perspectives, constitute more of a "stew view" than a "rabbit view" of discourse.

Divergence and Convergence: Variety in Harmony

James Heap talks about compatibilists versus incompatibilists, and argues that natural science cannot be a metaperspective for all inquiry about language. On the other hand, there was talk at various points in the conference about maintaining a "healthy eclecticism" in our work. The question that seemed to arise during our entire discussion was how much diversity we can tolerate as a field of study before we lose the essential quality of what we do.

An equally important question concerns whether there is a foolproof regimen for making sure that our eclecticism is a healthy awareness of multiple perspectives, rather than a multimethodological hodgepodge of loosely construed methods in search of a supportive theoretical framework. As a researcher, I must make sure that I am consciously choosing from among an array of methods derived from coherent perspectives. The potential for abuses in methodological borrowing concerns me. I was recently reminded of Thoreau's adage: "I went to the woods because I wished to live deliberately." In my continuously evolving career as teacher, thinker, and human being, I find each day just how much of what I do is unconscious and motivated by external forces such as review boards, tenure committees, and professional colleagues.

Although there are undoubtedly many more, I would like to focus on what I see as three major areas of convergence among all of the perspectives presented in this volume. Perhaps this is my summation of what I feel to be, as Hayes puts it, our "legacy of methods and standards" in our evolving rhetorical tradition as literacy researchers.

Consciousness. This involves recognizing the imprint of our human interpretation on the findings, methods, materials, and especially the implications we draw from our work. In becoming more conscious, we avoid impulsive conclusions, as we avoid the formulation of hasty prescriptions for classroom ills, and the glamour of simple solutions for complex literacy issues. For practitioners, consciousness means searching for what Cook-Gumperz and Gumperz (this collection) call "the implicit theory of learning" that undergirds their work.

Rigor. I am talking about rigor in creating, describing, and working within a *system* of research practices. This system must be evident in the inquiry process we follow and the conclusions we draw. But perhaps more important, this system must allow us to describe to others where we went and how we got there.

Adhering to standards of rigor does not mean arriving at or recognizing the same systems, but consciously creating and choosing describable systems for pursuing, generating, and sharing knowledge. I stress *sharing* in that process. For whether we are getting at inter-rater reliability (agreeing on "what is") or asking others about our views in light of a range of cultural possibilities (agreeing on "what's possible"), we are still dealing on some level with social agreement.

Humility. This final quality is perhaps most important. I am not talking about humility in terms of subservience or obsequiousness, but in terms of teachability. As it relates to self-awareness, humility means opening our closed constructs, constantly questioning our paradigmatic allegiances and our idio-perspectives. It means teaching ourselves who we are, being open to describing our own perspective shifts. On a social level, humility means asking ourselves not how we can impulsively borrow from other perspectives or how we can pull together a variety of methods in a sort of mindless eclecticism, but how we can learn from each other, how our questions run parallel or intersect.

In the beginning of this response, I talked about the fragile ecosystem of intuition and ideology, and the place of each in our research on literacy. It seems apparent from our discussion that responsible scholarship and practice demand equal attention to both. But more than equal attention, such scholarship demands the awareness that whenever intuition overshadows systematic and rational thinking, or whenever ideology cancels out the legitimacy of intuition, the result is a diminishing of what we know, not an enrichment.

This delicate balance is perhaps best captured in Donald Schön's description of how a disparate group of jazz musicians come together to produce a coherent performance:

> When good jazz musicians improvise together, they . . . manifest a "feel for" their material and they make on-the-spot adjustments to the sounds they hear. Listening to one another and to themselves, they feel where the music is going and adjust their playing accordingly. They can do this, first of all, because their collective effort at musical invention makes use of a schema—a metric, melodic, and harmonic schema familiar to all the participants—which gives a predictable order to the piece. In addition, each of the musicians has at the ready a repertoire of musical figures which he can deliver at appropriate moments. Improvisation consists in varying, combining, and recombining a set of figures within the schema which bounds and gives coherence to the performance. (1983, p. 55)

One evening a friend and I became mesmerized by the flickering of a fire. I remarked at how odd it is that each movement, each flame, is unique, yet there is an overall pattern to the whole thing. My friend, who is a graphic artist, explained that there is a principle called "variety in harmony," which operates in music, art, and even nature, to hold seemingly diverse phenomena together into a meaningful whole. A painting, a musical composition, the waves of the sea, and the flicker of a flame all consist of unique and irreproducible aspects; yet each is held together in harmonious relation to each other.

While each perspective represented in this collection may focus on different methods, aims, and tasks, a fundamental part of our work in the decades to come is to recognize and support the unique contribution of each to the texture, tone, and the entire composition of literacy research.

References

Applebee, A. N. (1987). Musings . . . Teachers and the process of research. *Research in the Teaching of English, 21,* 5–7.

Britton, J. N. (1984). Viewpoints: The distinction between participant and spectator role language in research and practice. *Research in the Teaching of English, 18,* 320–331.

Delpit, L. D. (1990). Language diversity and learning. In S. Hynds & D. L. Rubin (Eds.), *Perspectives on talk and learning* (pp. 247–266). Urbana, IL: National Council of Teachers of English.

Dewey, J., & Bentley, A. F. (1949). *Knowing and the known.* Boston: Beacon.

Gardner, H. (1985). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Keller, E. F. (1985). *Reflections on gender and science.* New Haven, CT: Yale University Press.

Kelly, G. (1955). *The psychology of personal constructs.* New York: Norton.

Langer, J. A. (1989). *The process of understanding literature* (Technical Report Series 2.1). Albany, NY: Center for the Learning and Teaching of Literature.

Rosenblatt, L. M. (1978). *The reader, the text, the poem: The transactional theory of the literary work.* Carbondale: Southern Illinois University Press.

Rosenblatt, L. M. (1985). Viewpoints: Transaction versus interaction—A terminological rescue operation. *Research in the Teaching of English, 19,* 96–107.

Schön, D. (1983). *The reflective practitioner.* New York: Basic Books.

19 What It Means to Be Literate

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> That authority—in whatever dialect, in whatever variant of the mainstream language—seems to me to be something we all desire. It's not that we all want to speak the King's English, but whether we speak Appalachian or Harlem English, or Cockney, or Jamaican Creole, we want to be at home in our tongue. We want to be able to give voice accurately and fully to ourselves and our sense of the world. (Hoffman, 1989, pp. 123–124)

At the center of my work, both in research and in teaching, is the question of how people learn to use written language to give voice to what they want or need to say. I grant that there are limitations in conceiving of writing as utterance. Children have shown us that writing grows not only out of speech but also out of drawing, gesture, and play. For adults, much private writing serves less fully as speaking than as remembering or thinking or simply noticing. And sometimes even the most public instances of writing are best understood as distinct from any alternative form of expression. In some circumstances, to write is *not* to speak.

Nonetheless, my sense of what it means to read and write is largely governed by a conception of writing as a way of speaking, a way of saying something to someone, and by a complementary conception of reading as a way of being spoken to, a way of listening. Becoming literate, as I understand it, is a dimension of language development. To study the development of reading and writing is to study the development of uses, forms, and processes of language. In my research and teaching, I am drawn to what seem to me the social foundations of such learning. Certainly the study of how people learn to read and write must consider how the human mind works with language and concepts. But equally important is the recognition that becoming literate is a matter of learning the social roles, knowledge, skills, attitudes, and values needed to participate in specific communities of readers and writers.

Learning to use written language, like learning to use spoken language, invariably involves more than being taught. Learning to write—the part of literacy I have given most of my attention—often begins before children meet formal instruction in school. From the beginning, and as the writer continues to develop through childhood, adolescence, and even adulthood, the process of learning to write engages a broad set of resources. When people develop as writers, they make use of their knowledge and experience as speakers; they draw on their knowledge and experience as readers (Saul Bellow once remarked that a writer is a reader moved to emulation); and they learn from their observations of other people reading and writing. They also draw on their inclination to experiment, to play, with cultural tools and cultural roles (Gundlach, McLane, Stott, & McNamee, 1985; McLane & McNamee, 1990). As they learn, they often use their ability to elicit technical help from more capable (or simply other) writers. And finally, those who develop fully as writers usually find both impetus and focus for their learning in their desire to establish a role and a voice for themselves in specific communities where written language serves particular and sometimes locally distinct functions.

Teaching and teachers are important, often crucial. But becoming literate is a broader process than formal instruction can fully control. One important task for any teacher is to help students recognize and use the resources for learning they already have. In this sense, teachers of reading and writing seek continually, as James Britton has phrased it, to reap a harvest they have not sown. Teachers also frequently face resistance they have not created. Sometimes students' resistance is social, even political. To participate cooperatively in school language practices is to cross a boundary of social identity that some students do not want to cross. Other times students' resistance is a way of coping with frustration or confusion. Mike Rose comments that some of the Vietnam veterans he worked with in a college preparation program "did all the things that learners, working class to upper crust, do when they lose focus or get scared or give up: They withdrew or faked it or got stoned or stayed home or blew up" (Rose, 1989, p. 154).

Even when students are eager to learn, many teachers in U.S. schools contend with constraints in their work that stem at least in part from conflicting values built into the goals and organizational structures of the institutions that employ them. Sometimes unwillingly, sometimes unwittingly, we who teach regularly teach something of the values of the place in which we teach, along with whatever we teach about the roles and conventions and possibilities of reading and writing. If becoming literate always involves more than being taught, teaching reading and writing always involves more than teaching reading and writing.

In my research and teaching I concentrate on writing—the fragile half of literacy, or so it seems to me, both in the experience of many people learning to write and in more formulations of literacy theory and research. I turn to literacy research, as participant and as spectator, for help in clarifying the nature of writing, the complex process of learning to write, and the possibilities and constraints in the teaching of writing.

Perceptions of the Conference Papers

Such were the interests and conceptual coordinates I brought to the Conference on Multidisciplinary Perspectives on Literacy Research held February 16–18, 1990, in Chicago—the meeting for which the papers in this volume were initially prepared. Discussion at the meeting was lively, and I found much to think about. My notes are full of provocative phrases. Dick Hayes told us that in his study of how the admissions staff at Carnegie Mellon judges undergraduate applicants, he wanted to "gauge lovability" in the college application essay. Linda Brodkey outlined a theoretical position emphasizing the interdependence of language, thought, and reality, and then argued that, in the long view, the "overdetermination [of the self] is good news," since the different discourses that exert shaping influences on the speaking self at least afford choices.

Peter McLaren argued that literacy itself may not necessarily be good news. The ability to read and write, he said, may well "open entire groups of people to new forms of domination and oppression." Jenny Cook-Gumperz and John Gumperz reminded us that what listeners or readers perceive as errors in language are often taken as tip-offs, markers of who the speaker or writer is. From this premise, they drew out the point that "theories of educability"—the basis for judgments about who can or should learn what—"are often built around small linguistic features." As they developed this idea, I recalled noticing that another presenter had written "supplimentary" on an overhead transparency. It occurred to me that this sort of misstep probably cost our presenter less in credibility than it might cost an eighteen-year-old applicant to Carnegie Mellon in implicit points for admission, if not lovability.

Having heard Cook-Gumperz and Gumperz point out the details of language use that seem so significant at the gates of privilege, where judgments are made about who may enter and who may not, I was struck by the rich knowledge found in the lives and minds of the families Luis Moll discussed—families whose children are often judged limited or deficient in their work at school. Listening to Moll, I reflected, too, on how important it is to create links between community and classroom, links that allow the strong voices people use outside of school to be respected and drawn upon in school, however distinct the goals of schooling may be from the goals of other forms of social life.

New Perspectives on Reading and Writing

From my point of view, the most important general theme that ran through conference discussions and that runs through many of the papers in this volume is that literacy researchers are becoming increasingly alert to the theoretical implications of recognizing that there are different ways of reading and writing—not just different reasons for reading and writing, different purposes or functions, but different attitudes or stances toward texts. A text can engage or repel you as a reader, depending partly on your sense of your specific cultural home and identity. Readers respond differently according not only to their level of knowledge or skill but also according to what they care about, what matters most to them. So, too, with writing: people differ in the sort of writing they decide to produce, whom they choose to address, and how they present what they have to say. Indeed, people who can read and write differ in whether they decide to read or write at all. These differences, we notice, are often charged with value: How you read or write is, at least in part, who you are. Reading and writing are not only ways of doing or knowing, but ways of being.

Important questions follow from these recognitions. How shall we describe different ways of reading and writing? Is there a stable vocabulary for differences that scholars can share across disciplinary or theoretical boundaries? How shall we work with the sense of *value* in reading and writing? When someone reads or writes, what in the act, in the performance, matters and to whom? How shall we describe conflicts of value involving reading and writing—conflicts between reader and writer, child and parent, teacher and student, researcher in one discipline and researcher in another?

If there are different ways of reading and writing, and these differences matter, how shall we understand the *choices* available to a reader or writer in a particular situation? How do people learn about the choices available to them? How do the consequences (either observed or anticipated) of particular ways of reading or writing constrain or even determine choice? How are choices among alternative ways of reading or writing offered by one person to another—by parents, by teachers, by college admission counselors, by job interviewers, by census takers, by researchers conducting experiments?

How, given our increasing attention to different ways of reading and writing—differences charged with value and tied to identity—shall we characterize the learning of reading and writing?

Problems with Methods of Literacy Research

On the question of characterizing the learning of reading and writing, it seems to me that literacy researchers often get tangled up in three problems.

First, we notice the severely normative cast of school literacy experience, but in imagining a better way we often offer solutions that are equally normative and sometimes a touch utopian: the ideal classroom, the ideal teacher. Perhaps social theory and analysis would help point up the workings of bureaucratic control underlying illusions of the ideal classroom. Or perhaps a psychological analysis of control would prove useful. We would probably do well, for example, to try to absorb into our theories of instruction the value of Winnicott's phrase, "good enough," presented to us again recently by Bettelheim. It is important, Winnicott argued, for parents to decline the temptation of aiming for perfection; it is better to try to be good enough. If parents (and, by implication, teachers) try to be good enough rather than perfect, they are more likely to help children (or students) pursue lives of their own, even when those lives are different from the lives imagined for them by well-intentioned adults. In any case, a preoccupation with articulating idealized forms of classroom life can have the effect of shifting the focus away from a steady consideration of how people develop as readers and writers both in school and out.

A second snag is that although we recognize that claims about literacy are necessarily historical, we don't have much history of the character and uses of literacy in the United States to which we can turn. Carl Kaestle at the University of Wisconsin is working on a series of historical studies of diversity in the American reading public. It would have been helpful to have included him or another historian in this conference meant to embrace the disciplines relevant to the study of literacy. In my own work I confess that I formulate historical ideas as I need them. I believe, for example, that much writing in school is properly understood as a bureaucratized form of recitation. Instead of standing up and reciting their lessons, students sit down and write them. This characteristic school speech event, only half transformed into a literacy event, is highly constrained, and teacher and student alike often get disoriented when the constraints are ignored. My reading on the history of universities persuades me that one of the historical roots of writing as bureaucratized recitation can be found in the shift from spoken to written exams at Charles Eliot's Harvard in the nineteenth century. Written exams were more efficient; people could be tested simultaneously rather than one at a time. Because written exams eliminated the traditional performance of spoken recitation witnessed by boards of overseers, they also allowed recitation to become a more private encounter between teacher and individual student. Hence the basis for assessing learning came more completely under the teacher's control. I suspect that the history of formal educational assessment can be understood in part as a struggle by overseers (in various guises) to recover some control over the business of the classroom. This historical thread makes sense to me and suits my view of writing as a way of speaking. But I, and others, would be better served by fuller historical work on literacy, work that considers both historical continuities in spoken and written genres and historical transformations and disruptions in how people communicate. Recently a number of studies have addressed these topics, although most so far have concentrated on nations other than the United States. It remains, however, for those of us whose scholarship is not directly historical to integrate historical perspectives and understandings into our theories and research.

A third problem for literacy research has to do with the institutional circumstances in which we conduct our work. Interest in the full scope of how people learn to read and write has been peripheral to the concerns of most academic disciplines for a long time. Educational researchers have traditionally concentrated on the behavior of teachers and students in school. Linguists, especially in recent decades, have paid little attention to reading and writing. The linguistic scholarship we do have focuses mainly on the nature of writing systems. Psychologists and, very recently, cognitive scientists have studied reading intensively but relatively narrowly. From this work we have learned much about the general human capacity for decoding and comprehending, but far less about differences in how people use reading and writing, or about differences in how people develop as readers and writers. Scholars in other social sciences have been wary of the complexity and perhaps even the familiarity of literacy activities, though social historians have begun to demonstrate how various uses of written language have been woven through the history of different cultures. And literary scholars in university English departments, interested though they have been in reading and writing, should not, I sometimes think, be trusted with children. I recall Janet Emig commenting at an MLA meeting in 1977 that when she proposed a dissertation study focused on the writing of twelfth graders, one English professor at Harvard couldn't see much value in her project. "Studying the writing of high school seniors," he said, "would be like studying the ice skating of cripples." It is true—and noteworthy— that literary scholarship has changed considerably since the mid-1960s, when Emig conducted her study. Still, I winced when I came across this sentence in MLA's *Profession 89*, celebrating the new shape of scholarly work in literary studies:

> Thus, to the distress and bewilderment of their colleagues as well as people outside the academy, professors of literature have been observed not only entering strange temples and returning with strange gods and ceremonies but also to be performing their customary duties with noncanonical instruments and upon noncanonical objects: not merely upon such noble if still profane texts as works of history, philosophy, science, and law but also upon such utterly taboo objects as popular and ephemeral writings, the verbal productions of children and other illiterates, and what is colorfully referred to as "pure trash." (Smith, 1989, pp. 2–3)

As Hayes (this collection) reminds us, it is important to notice the continuities of value in discipline-based ways of inquiry, even as we notice dramatic changes in focus and paradigm. It is an interesting time to be studying literacy, and a good time to ask how different disciplines can help in the project. But we need to remember that in one sense the key issues in the study of literacy are not so much multidisciplinary as extradisciplinary. Literacy scholarship contributes to a broad social narrative. It is a story that can be heard or seen or felt in schools, places of work, homes, government agencies, television shows, and newspaper editorials. It is a tale about how reading and writing figure in people's lives and about how these abilities or activities or practices are learned. This narrative in turn helps shape the educational experience of children, adolescents, and adults, both in school and out. In our collective efforts to give both focus and breadth to literacy research, we do not need to strive for methodological or even ideological consensus. We would be wiser to focus on the pervasive theme of *difference* in our work, and to commit ourselves simply to staying in conversation across theoretical and disciplinary boundaries. But whatever the perspective from which we conduct our work, we ought to be asking not only eagerly but critically how the traditions of various disciplines influence our definitions of what it means to be literate. That is, we ought to be thinking not only about the consequences of literacy, but also the consequences of literacy research.

References

Gundlach, R., McLane, J. B., Stott, F. M., & McNamee, G. D. (1985). The social foundations of children's early writing development. In M. Farr (Ed.), *Advances in writing research: Vol. 1. Children's early writing development* (pp. 1–58). Norwood, NJ: Ablex.

Hoffman, E. (1989). *Lost in translation: Life in a new language*. New York: E. P. Dutton.

McLane, J. B., & McNamee, G. D. (1990). *Early literacy*. Cambridge, MA: Harvard University Press.

Rose, M. (1989). *Lives on the boundary: The struggles and achievements of America's underprepared*. New York: Free Press.

Smith, B. H. (1989). Presidential forum: Breaking up/out/down—The boundaries of literary study: Introduction. *Profession 89*, 2-3.

20 Multidisciplinary Research on Literacy and the Possibility of Educational Change

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At a time when the public discourse on literacy education is a debate over cracking the code at one end of the educational spectrum (e.g., the exchange between Chall [1989], Carbo [1988], and Taylor [1989]) and the canon as code at the other (e.g., the controversy over Stanford's "Western Civilization" course as well as critiques by Bloom [1987] and Hirsch [1987]), scholars are seeking to overthrow these simplistic and hegemonic views by calling for research that employs multiple perspectives on literacy. Multidisciplinary research on literacy is thus a project fueled by "a belief and a hope," as James Heap (this collection) puts it. He writes:

> The belief is that literacy phenomena are so complex that no one approach can illuminate all of what is called literacy. The hope is that the use of multiple perspectives will tell us more than we could know about literacy from any one perspective.

There were few, if any, conference participants who did not share the belief Heap articulated. More controversial, however, was the hope of designing literacy research that draws on more than one perspective. This challenge raised the specter of research paradigms and led to the familiar debate over the incommensuratability of paradigms (Kuhn, 1970). Though there was some discussion over whether contrasts like "qualitative/quantitative" or "realist/interpretive" referred to particular techniques, axioms about knowledge, or rhetorical traditions, the question of multidisciplinary research was, for the most part, framed in terms of epistemology. Some authors argued for a rapprochement between "quantitative" and "qualitative" paradigms; others (such as Heap) claimed that the epistemological underpinnings of different disciplines are incompatible, making the hoped-for eclecticism untenable. Still others implicitly acknowledged, as my colleague David Hursh pointed out, that epistemology is contested *within* disciplines (e.g., within sociology there are positivist, interpretive, and critical traditions) and proposed a middle position, wherein disciplines that share a set of assumptions about knowledge (for example, cultural anthropology, sociolinguistics, and some brands of literary theory) could be meaningfully brought to bear on a particular literacy question. My hunch is that, for educators, resolving these tensions over the possibility and/or nature of multidisciplinary literacy research will in large part depend on how we think about educational research in general. Therefore, I will frame my response to the conference in terms of this issue, in the hope of broadening the conversation about multidisciplinary research on literacy to include concerns that are distinctly educational in nature.

My question is this: If we could come to some agreement on the nature of multidisciplinary research on literacy, would we then "apply" it to education? What concerns me about the debate over multidisciplinary research is that it takes, as a given, the relationship between education and the disciplines from which literacy researchers have drawn. The history of that relationship is a history of domination in which "findings" from "basic" research are "applied" to educational settings. In such a relationship the purposes and canons of research are set by the disciplines, and we are carried along by the prevailing discourse without stopping to ask, as Judith Green did in the opening session, what are essential approaches for *educational* issues? Is there something we as educators will create *within* education, she asked, or will we always borrow? If we are to have multidisciplinary research on literacy that offers the possibility of meaningful and democratic educational change, then it may be worthwhile to make problematic the relationship between education and the disciplines from which we traditionally "borrow." In proposing this stance, I am not suggesting that educational researchers isolate themselves from the theories and practices of other disciplines, but that our dialogues with other disciplines become grounded in questions central to educational change. I am asking, in other words, what it would mean to take seriously the idea of education as a basic rather than an applied field.

This is not an academic question, but one that grows out of my own experiences over the last several years with two different projects, one aimed at creating professional development schools and the other at promoting reflective thinking in secondary mathematics classrooms through the introduction of "rich" mathematical texts—stories, historical essays, newspaper articles—and transactional modes of reading (Borasi & Siegel, 1988; Borasi, Sheedy, & Siegel, 1990; Siegel, Borasi, & Smith, 1989). Both projects involve collaboration between schools and universities; both view teachers as researchers; both attempt to create educational communities that support meaning-making and reflection. Both, in other words, are grounded in the belief that understanding and application are bound up in a single moment (Gitlin, Siegel, & Boru, 1989) and that, unlike anthropologists, linguists, literary theorists, sociologists, and psychologists, the educational researchers' purpose is to change (or, more modestly, challenge) the status quo of schooling so as to achieve more democratic and egalitarian interests.

But this kind of work invites a struggle over values that is usually seen as distinct from research. As I work across school sites—planning mathematics units with collaborating teachers, participating in seminars where student teachers and cooperating teachers share their ongoing research projects, helping students in mathematics classrooms think beyond algorithms—I encounter resistance that is not easily overcome by appeals to "data." Mathematics students, student teachers, and teachers do not change their approaches to learning and teaching simply because someone—a researcher in this case—proposes a new direction, no matter how much empirical evidence is marshaled in support of that new direction. My experiences with research projects oriented toward change have taught me that there is no such thing as "pure" knowledge, separate from the values people hold. Hence, I have come to believe that we cannot formulate multidisciplinary literacy research on epistemological terms alone, since questions of epistemology cannot be separated from questions of ethics. What is needed is a broader dialogue on the purposes of education, one that focuses on the connections between what we do in classrooms and what we hope to achieve in our communities. The connection between classroom and community is basic to research in education and, as such, suggests a different starting point for designing multidisciplinary research on literacy.

Drawing on the work of Lawrence Stenhouse, Carr and Kemmis (1986) state a position for critical educational research that captures my sense of what is distinctive about education as a field and, by extension, what would constitute basic research in education. They write:

> A critical educational science . . . takes a view of educational research as critical analysis [and, I would add, action] directed at the *transformation* of educational practices, the educational understandings and educational values involved in the process, and the social and institutional structures which provide frameworks for their actions. In this sense, a critical educational science is not

> research *on* or *about* education, it is research *in* and *for* education. (p. 156, emphasis in the original)

The difference between research that is "on or about" education and research that is "in and for" education is the difference between detachment, the stance researchers are expected to take in most disciplines, and engagement, a stance that favors participation bordering on activism. If what is basic to education is a commitment to creating learning environments that foster just and democratic forms of community life, then educational researchers will want to do more than walk away at the conclusion of the study, armed with new knowledge; they will want to work in ways that make a difference to those whose world they have entered and perhaps make the reconstruction of that world the central research question. In short, education is not simply a site for other disciplines to "apply" their theories, but a field with distinct purposes and questions. My response to the papers presented at the conference was guided by this perspective; I was drawn to the papers by Bloome and Bailey, Brodkey, McLaren, and Moll since each of these papers presented a perspective on language and literacy that spoke most directly to the possibility for change in schools.

Bloome and Bailey (this collection) present an agenda for studying language and literacy use in classrooms that does not lose sight of the historical, material, social, and ideological contexts that come together to create particular classroom literacy events. Their discussion of the complexity and particularity of classroom literacy events illustrates why educational research cannot be thought of as a straightforward application of theoretical constructs and principles from other disciplines and why, instead, it requires collaboration with teachers and students. Indeed, their intent is to give voice to teachers and students, who are so often the subjects of research without being seen or heard, by capturing the particular through the analytic lens of the event. In proposing the event rather than the individual as the unit of analysis, they argue for a theory of language and literacy in use which locates meaning in the social interactions that reflexively construct the event. However, this emphasis on local knowledge (Geertz, 1983)—the face-to-face negotiation of interpretive frames and social identities—does not, as Bloome and Bailey say, "preclude an acknowledgment of broad sociological processes." By including a consideration of three dimensions of events—history, dialectics, and material—Bloome and Bailey identify connections between the immediate context of the event and broader sociological processes, thus showing how events are constructed by forces often regarded as lying outside the bounds of literacy research.

Bloome and Bailey (this collection) argue that events do not exist in isolation but have a history that influences "the meanings created, the social identities formed, the material goods given significance" in a particular event. "In any particular classroom," they explain, "teacher and students are constrained by the historical impetus that created the institution of their particular school with its concept of teacher and student roles, its specific views of knowledge and the acquisition of knowledge, and the particular historical/biographical experiences of the students and the teacher."

This discussion of history is an important corrective to the here-and-now perspective so common in education, since it demystifies classroom roles and practices, pointing out their status as cultural products. Equally important is their discussion of the role of dialectics in literacy events. Bloome and Bailey note that "in any event there is a series of contradictory forces, and it is within the context of these contradictory forces—their definition, their creation, their resolution—that people act and react to each other." As an example, they point to the dialectical tension in schools between respect for students' individuality and the need for group control. The dialectical aspect of their analysis moves us away from simplistic characterizations of classroom literacy events as products of either/or decisions toward an approach that shows these events as shaped by multiple and contradictory forces. What is especially significant about the historical and dialectical dimensions of their analysis, though, is that they make explicit the constructed nature of classroom events and, in doing so, provide an opening for *re*constructing them in ways that support all learners.

Bloome and Bailey place intertextuality at the center of their analysis because it provides the critical link between literacy events and the broader process of education. They argue that the juxtaposition of texts in a literacy event serves as an index of cultural ideology; the inclusion of some texts and not others and the fact that there is variation within a classroom regarding "who gets to make what intertextual relations and how" suggest that intertextuality is not innocent but communicates the prevailing norms and values of schooling to students. Hence, Bloome and Bailey suggest that what students learn in the course of classroom literacy events is something other than how to read and write, namely, competence in the use of a particular language that prepares them for more schooling. Education, they conclude, is thus a process of communicative competence.

In characterizing education in this way, Bloome and Bailey highlight the reproductive function of schooling and remind me of what we are up against when we attempt educational change. While it is important to understand the force of this reproductive function, I think they might leave more room for hope if they explored further the implications of Bakhtin's notion that "every utterance is both a reflection and refraction of history." Language as reflection suggests a reproductive process, one that works to maintain the status quo, whereas refraction suggests a bending away from that direction, an acknowledgment of human agency and the possibility for generating a literacy event that encourages students to see their world in new ways. The notion of education as communicative competence will leave more theoretical room for the possibility of change if both reflection and refraction are examined.

There are interesting similarities between Bloome and Bailey's position and the one Brodkey takes: both are interested in giving voice; both regard social reality (and, consequently, school practices) as constructed; and both see literacy as cultural ideology, not just language. Brodkey, however, is more interested in making the political dimensions of literacy theory, research, and pedagogy explicit so as to understand why our literacy practices have not succeeded in helping all groups achieve social and political equity. She is not naive about the role literacy can play in empowering those whose voices have been silenced, but neither is she complacent about our collective failure in the area of literacy. She writes (this collection): "If my work has been motivated by the coincidence of literacy and liberation, my writing has been an attempt to account for our failure to make literacy an offer people cannot refuse." Brodkey's assumption is that this failure is not a matter of cognitive or cultural competence, but arises from the way humans are positioned in the discourse(s) or ideologies that construct social reality. Her use of poststructuralist theories of language is thus motivated by her belief that literacy events on a local level are connected to "the more remote and less visible, but critical, historical and sometimes even historic circumstances . . . that also determine the social, economic, and political meaning and value of literacy."

Poststructuralism rejects the Saussurian distinction between *langue* (language as a system) and *parole* (language as used), or competence and performance, in order to move beyond the structuralist separation of language, thought, and reality. In contrast to the structuralist assumption that language is arbitrarily linked to an objective reality, poststructuralist theories propose discourse, a worldview or ideology, as the nexus of language, thought, and reality. Hence, Brodkey argues, what we learn to read and write is discourse—a way of thinking about the world and our place in that world—and not language. For her, then, the poststructuralist project is "to demystify [discourses] and the part they play in our constructions of self, other, and reality. Instead, these discourse theories consider the part language plays in our constructions of self, other, and reality in *texts*" (emphasis in the original).

The focus on textual analysis over other forms of action in poststructuralist theory raises questions for me. Though it is essential that students and teachers begin to critically examine and uncover the discourses that construct their worlds, students may become paralyzed by the critique of the dominant discourses and fail to consider new ways of acting in and on their world. Brodkey counters this by arguing that writing a new text will help transform passive subjects into active agents of their own lives, though she herself notes that the poststructuralist tendency to ignore the fact that all subject positions are not equal in the world outside the text is a serious limitation of poststructuralist theory, "which is primarily a macro theory of discourse and discursive representation and only secondarily concerned with the micro concerns of applied theory which deals, or should," with the material effects of discursive practices. McLaren provides a helpful discussion of this point to which I will return when I discuss his work.

Brodkey is especially clear on what poststructuralism can contribute to the goal of making literacy "an offer people cannot refuse." Briefly, her argument is that if language plays a part in the construction of social reality, then teachers and students can have a role in constructing more equitable realities. She writes (this collection): "If what we say and write matters, if what students say and write matters, if words constitute worldviews rather than simply state reality and thoughts, then poststructural theories are the only ones I know of that even broach the implications of that claim for research on literacy." Two theoretical concepts, in particular, hold promise for those who "see practice as the legitimate site of educational reform": first, the idea that in democratic societies the domination of a particular discourse is achieved through struggle means that learning more than one discourse suggests the possibility of undermining the authority of the dominant discourse; and, second, the notion that each discourse offers an array of subject positions as well as a worldview means that subjects can shift their positionings. Both of these concepts derive their transformative potential from the poststructuralist rejection of reality as a single worldview with objectively determined subject positions. The image of social life as a struggle among competing discourses with multiple subject positions provides an opening for challenging the dominant discourse and the subjectivities assigned by that discourse. Brodkey believes that the fact of a socially constructed reality gives teachers and students the opportunity to write a new text, or at least " 'interrupt' those discursive practices that, for one reason or another, appear counterproductive to teaching and learning." It is this act of interrupting that I see as the focus of educational research. By articulating a theory that makes the potential for change integral rather than external to language and literacy, Brodkey shows why literacy is a particularly fertile site for research that is "in and for" education.

McLaren's paper is a good complement to Brodkey's in that he brings together poststructuralist theories and the tradition of critical education in the form of critical literacy. This juncture suggests a connection between pedagogy and social change, one that acknowledges the domination of larger historical, economic, and political forces while maintaining a view of students and teachers as active agents with the potential to shift their social positionings. He argues that critical educators perceive literacy education as leading to changes in the social order. Like Brodkey, McLaren rejects the simplistic notion that literacy is, in and of itself, liberating, and suggests that from the perspective of poststructuralism, traditional approaches to teaching English embody a discourse of literacy that creates particular subject positions serving particular interests. But he is not without hope that literacy can become a form of resistance that may contribute to the development of more democratic forms of social life. Such a shift would require a re-negotiation of the power relations in classrooms, such that students and teachers become active subjects, analyzing and authoring their own subjectivities. It would require, too, that those advocating critical literacy continue to ask questions about the relationship between the political interests of their own discourse—Whose interests are being served in the social act of becoming literate? Where is this process situated ethically and politically in matters of social justice? What principles should we choose in structuring our pedagogical endeavors?—lest they be caught in the ironical position of using a radical discourse to reinforce the status quo.

McLaren draws on the same poststructural constructs as Brodkey in both explicating critical literacy and pointing to its liberating potential: the idea that discourses are not reflections of an objective, disinterested reality but are constructed historically; the notion that there are multiple and competing discourses and that these discourses are themselves filled with contradictions; and the idea that becoming literate has more to do with reading the world than reading the word. But McLaren is more critical of poststructural theories and presents a very helpful review of the criticisms that have recently surfaced in academic circles. Of particular interest to me was his discussion of the criticism feminists and others have made that poststructural theories reduce human agency to subject positions, having taken Derrida literally when he announced "there is nothing outside the text." As a corrective, McLaren proposes that poststructuralist theories follow the lead of feminist analyses, which resist the tendency toward textualization and maintain a focus on the way material conditions and power relations continue to oppress women and others at the margins. This revision of poststructuralist theory, he suggests, may prevent it from becoming a conservative force that is disconnected from the actual lives of those it represents.

Each of the papers I have discussed has taken as its central thesis the interrelationship of literacy and the broader social and political contexts, and in doing so, has rejected notions that either reduce literacy to linguistics or simplify its liberating potential. The fact that each perspective struggles with the tension between the macro and the micro dimensions of language and literacy only serves as a reminder that understanding language in use is a complex undertaking. This complexity is fully evident in Luis Moll's description of a school/community literacy project, and so is the value of attempting to link classroom learning with the social life of the community for purposes of individual and community self-determination. Unlike Bloome and Bailey, Brodkey, and McLaren, Moll began his conference presentation by explaining that his work was driven by practical concerns and not by an allegiance to a particular theory or method. Yet, from my perspective, his work exemplifies what I am calling basic educational research, because it explores the possibility of changing the experience of schooling for Latinos by constructing both new forms of literacy instruction and new forms of social relations between classrooms and the community.

Guided by a concern for the high dropout rate among Latino youth, the poor achievement of those who do stay in school, and the prevalence of rote skill instruction justified by deficit conceptions of Latino students' knowledge and ability, Moll and his colleagues developed a literacy project that brought the community into the school and educators to the community. The project has three components: (1) ethnographic work in households, which enables researchers to document the "funds of knowledge" (including knowledge of literacy) in each household as well as the social networks through which knowledge is exchanged in the community; (2) an after-school lab that involves both a study group for collaborating teachers where they analyze literacy and explore ways to incorporate community funds of knowledge into the classroom, and a lab for students where researchers develop and try out new instructional experiences; and, (3) the development of meaning-based literacy curricula that draw on community funds of knowledge and invite the participation and contributions of community members in the intellectual life of the classroom. I think the significance of this design is that it links the transformation of literacy instruction to a shift in social relations between teachers, researchers, and the community, thus resisting the educators' tendency to isolate classrooms from their cultural, historical, economic, and political contexts. The participation of members of the community in the classroom curriculum, as representatives of both community knowledge and community values, opens the way to a broader dialogue on how schools can change to become sites for meaningful learning and political hope. Finally, this project is suggestive of another kind of shift in social relations, namely, the relations between education and the disciplines that take literacy as an object of research. In Moll's project, purpose as defined by the community, not method, was the starting point for research. Moll and his colleagues made use of various disciplinary perspectives in the course of their work, but the traditional relationship between basic and applied research was inverted in order to work for educational change. This, for me, is both the promise and challenge of multidisciplinary research.

The idea of multidisciplinary literacy research is appealing because it regards knowledge as partial and perspectival and, thus, invites a dialogue that is likely to be as polyphonic as the one represented in this book. What was unique and hopeful about this conference was that no one disciplinary perspective dominated the conversation. But if we ever hope to realize the potential of multidisciplinary literacy research for contributing to the goal of educational change, the dialogue must include the voices of teachers, students, and the community, none of whom have an entree to a multidisciplinary research project that is controlled by the disciplines.

References

Bloom, A. (1987). *The closing of the American mind.* New York: Simon and Schuster.

Borasi, R., Sheedy, J. R., & Siegel, M. (1990). The power of stories in learning mathematics. *Language Arts, 67,* 174–189.

Borasi, R., & Siegel, M. (1988). Reading to learn mathematics for critical thinking. Proposal to the National Science Foundation (Grant No. MDR-8850548).

Carbo, M. (1988). Debunking the great phonics myth. *Phi Delta Kappan, 70,* 226–240.

Carr, S., & Kemmis, W. (1986). *Becoming critical: Education, knowledge, and action research.* London: Falmer.

Chall, J. (1989). *Learning to read: The great debate* 20 years later. *Phi Delta Kappan, 70,* 521–538.

Geertz, C. (1983). *Local knowledge.* New York: Basic Books.

Gitlin, A., Siegel, M., & Boru, K. (1989). The politics of method: From leftist ethnography to educative research. *International Journal of Qualitative Studies in Education, 2* (3), 237–253.

Hirsch, E. D. (1987). *Cultural literacy: What every American needs to know.* Boston: Houghton Mifflin.

Kuhn, T. (1970). *The structure of scientific revolutions.* Chicago: University of Chicago Press.

Siegel, M., Borasi, R., & Smith, C. (1989). A critical review of reading in mathematics: The need for a new synthesis. In S. McCormick & J. Zutell (Eds.), *Cognitive and social perspectives for literacy research and instruction* (pp. 269–277). Thirty-eighth Yearbook of the National Reading Conference. Chicago: National Reading Conference.

Taylor, D. (1989). Toward a unified theory of literacy learning and instructional practices. *Phi Delta Kappan, 71,* 184–193.

21 What I Learned at This Conference: A Personal Narrative of a Literacy Event

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What follows is a personal narrative; it is a story about my difficulty in reading a set of academic papers. When I finally gave up in frustration and turned to watch an apparently unrelated film I found, to my surprise, a conceptual tool in the presence of a trickster who allowed me to understand my difficulties in reading. The topic for the conference, perspectives on literacy research, suggested to me that a response could explore through self-report and reflection one's own literacy experience.

The Reading Episode

On the weekend of February 16–18, 1990, I attended the conference "Multidisciplinary Perspectives on Literacy Research"—the event that provided the impetus for this volume. My story, however, begins several weeks before the start of the conference. I received a complete set of papers from the conference organizers. As I read each paper, I was drawn into the narrowly defined world of that particular writer/researcher. Each paper presented a cosmology of its own, a world order in which assumptions drove questions, questions drove methods, and methods produced conclusions. The papers were drafts, I reminded myself, and probably written without the benefit of the conference organizers' perspectival comments. I was dismayed; I told myself, "I'll never be able to write a paper on what I learned." I could not look through the deliberately focused lens of one writer/researcher and think about the same literacy issues in terms of another writer/researcher's perspective.

What did I learn? I learned that situations and events are socially constructed. I learned that some things are cognitive processes and others are ideological phenomena. I learned that we can theorize about the representation, structure, and organization of world knowledge. I learned that a theory is an account of something, not the thing itself. I learned that a rhetorical situation constrains material events. I learned that the research process is a complex dialectic. I learned that writing is a discursive practice. I learned that a natural science approach is incompatible with a cultural science approach. Each of the things that I learned made sense in the context of its original paper; attempting to create a dialogue across papers seemed impossible. What I learned later through the trickster was that while each represented only one side of a coin—or in the African parable, one side of the hat—they purported to tell an entire truth. The dialogue of the conference would be critical in putting the picture together.

I was frustrated and in trouble: my reading plan was not working. As I read, I wondered, "What will I say? What can I have learned?" This sort of reading tired me quickly, for I was trying too hard—no quick synthesis or knowledge formation emerged. The language of these papers, and my difficulty in reading them as a group, I now realize reflects what Mikhail Bakhtin (1981) calls the centripetal force of language, that language which seeks to "unify and centralize the verbal-ideological world" (p. 270). Most of the papers I read seemed to propose a unitary language that might give "expression to forces working toward verbal and ideological unification and centralization, which develop in vital connection with the processes of sociopolitical and cultural centralization" (Bakhtin, 1981, p. 271).

The Film Episode

I started to drift off to sleep and realized that further reading was of little use. Resisting an end to my quiet evening, I slipped a videotape loaned to me by a friend ("You have to watch this; I know you'll love it.") into my VCR, figuring that I would watch for a while, fall asleep, and waken to the white noise of a buzzing screen.

Instead of falling asleep, I began to wake up. The film, *Brother from Another Planet* (directed by John Sayles), captured my attention and engaged my imagination. Perhaps because I was not directed to write a response titled, "What I Learned from This Film," the associations developed from my earlier reading rushed to meet the movie in unexpected ways.

An extraterrestrial, played by Joe Morton, lands at the Ellis Island Immigration Center. He does not speak, but has strange powers that allow him to hear the troubled voices of people who were present at that location in the past. At the beginning of the film, the extraterrestrial's skin color is black but through the course of events, through his experiences, and through the voices he hears, he learns what it means to be an African American. He constructs himself and is constructed by society as an African American.

Studying everything around him, he rides the ferry over to New York. He startles at the cry of a waterbird. Hobbling on his injured leg, he ducks into a doorway, frightened by the rap music booming from a nearby radio. He listens and he observes. He sees a white police officer shaking down an African American youth. When he sees people exchange money for goods, he reaches into a fruit stand's cash register and hands the money to a young Vietnamese shopkeeper in exchange for a pear, causing the shopkeeper to shout at him angrily in Vietnamese and to call after the police officer down the street.

The extraterrestrial might be seen as a naive empiricist constructing reality. As the audience, we participate in the extraterrestrial *cum* "Brother's" emerging vision of the world he has landed in. The narrative of the film evolves as a quest in which the extraterrestrial, the hero, constructs himself as an African American. The extraterrestrial is not just learning about our culture, he is developing an ideology, a stance in relation to the events he observes and participates in.

In one scene the Brother meets up with a jauntily dressed young white man—a self-styled card shark and performance artist—who is always on the lookout for subjects on which to practice and perfect his craft. The nameless youth is not interested in something as obvious and inconsequential as money. Rather, he functions as a trickster, a Hermes-like character whose role is to use words and language (and, importantly, an artful dialogue) to draw the Brother into a world order or cosmology that the trickster constructs. As viewers, our position allows us to see the young man as a trickster, one who finds joy and power in the art of the "hustle" or, as I will explain later, in the free play of initiating indeterminacy and ambiguity.

How does language function for us during the course of this adventure? In watching the film under the influence of the conference papers, I found a counterpoint to the centripetal forces of language that worked to normalize the language of the speakers' preliminary drafts. The trickster makes use of what Bakhtin calls the centrifugal force of language, which functions to decentralize and destabilize meanings. As Bakhtin has demonstrated in his work on Rabelais, the centrifugal force of language is often presented as a degraded genre used by the clown, rogue, and as I will demonstrate here, the trickster.

In this scene, the young man approaches the Brother as he sits on the subway. It is early in the film and the Brother is still quite frightened and cautious. The trickster is undaunted by the Brother's silence and gently encourages him to participate in the hustle. He engages the Brother in an elaborate card trick, in which he tells a story and pulls up card after card to illustrate the numerical features of the story.

The trickster asks the Brother, "Wanna see a card trick? No, really it's a story. OK, move over. I'm going to tell you a little story about Joe and the bartender."

The remainder of the scene focuses on the elaborate laying out of the entire deck of cards as the trickster's story proceeds. Only occasionally does the trickster turn to the Brother and ask him to cut the cards, a request the Brother doesn't understand.

By the time the trickster has completed the story—turning up the correctly numbered cards at each turn, cutting the deck several times, finally displaying the triumphant straight flush—he has the Brother's rapt attention and even his allegiance.

But the exchange between the trickster and the Brother is not over yet. The trickster folds the cards and says, "I have another magic trick for you. Wanna see me make all the white people disappear?" The Brother looks at him in wonder. In the background we hear over considerable static the muffled announcement, "This train is going express to 125th Street." Not hearing or comprehending this message, the Brother stares in utter amazement as the whites leave the car one after another in an orderly fashion. The trickster, the last one to leave the train, stops at the door and smiles knowingly, "See, what'd I tell you?"

From our privileged and knowledgeable position we can see the trickster's work as a scam, yet to the Brother the trickster's work appears as powerful magic: through what appears to us as sleight of hand, the trickster seems capable of manipulating reality. I began to ask myself, with regard to the papers I had read earlier, "How do we know what we see?"

Enter the Trickster

Brother from Another Planet presents a narrative of a hero's quest which, Joseph Campbell (1949) asserts, reflects the standard pattern of a persistent, recurring myth, the "secret opening through which the inexhaustible energies of the cosmos pour into human cultural manifestation" (p. 3). The pattern distilled by Campbell is as follows:

> A hero ventures forth from the world of common day into a

> region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man. (p. 30)

Along his mythic journey, the Brother meets the trickster, whose role is to disrupt and destabilize his surroundings, calling into question what the Brother thinks he has seen. Campbell, who recounts tales of many trickster figures in his study of world mythology, seeks to illuminate the timelessness of all of these stories: "One knows the tale; it has been told a thousand ways" (p. 3). Henry Louis Gates, Jr., in *The Signifying Monkey: A Theory of Afro-American Literary Criticism,* recounts tales of the trickster Esu, an African deity who, Gates argues, was displaced in the New World by the "signifying monkey" (p. 15). Gates (and Campbell, too) offers the "Tale of Two Friends" as a quintessential trickster tale.

> Everyone knows the story of the two friends who were thwarted in their friendship by Esu. They took vows of eternal friendship to one another, but neither took Esu into consideration. Esu took note of their actions and decided to do something about them.
>
> When the time was ripe, Esu decided to put their friendship to his own little test. He made a cloth cap. The right side was black, the left side was white.
>
> The two friends were out in the fields, tilling their land. One was hoeing on the right side, the other was clearing the bushes to the left. Esu came by on a horse, riding between the two men. The one on the right saw the black side of his hat. The friend on the left noticed the sheer whiteness of Esu's cap.
>
> The two friends took a break for lunch under the cool shade of the trees. Said one friend, "Did you see the man with a white cap who greeted us as we were working? He was very pleasant, wasn't he?"
>
> "Yes, he was charming, but it was a man in a black cap that I recall, not a white one."
>
> "It was a white cap. The man was riding a magnificently caparisoned horse."
>
> "Then it must be the same man. I tell you, his cap was dark—black."
>
> "You must be fatigued or blinded by the hot rays of the sun to take a white cap for a black one."
>
> "I tell you it was a black cap and I am not mistaken. I remember him distinctly."
>
> The two friends fell to fighting. The neighbors came running but the fight was so intense that the neighbors could not stop it. In the midst of this uproar, Esu returned, looking very calm and pretending not to know what was going on.
>
> "What is the cause of all the hullabaloo?" he demanded sternly.
>
> "Two close friends are fighting," was the answer. "They seem

intent on killing each other and neither would stop or tell us the reason for the fight. Please do something before they destroy each other."

Esu promptly stopped the fight. "Why do you two lifelong friends make a public spectacle of yourselves in this manner?"

"A man rode through the farm, greeting us as he went by," said the first friend. "He was wearing a black cap, but my friend tells me it was a white cap and that I must have been tired or blind or both."

The second friend insisted that the man had been wearing a white cap. One of them must be mistaken, but it was not he.

"Both of you are right," said Esu.

"How can that be?"

"I am the man who paid the visit over which you now quarrel, and here is the cap that caused the dissension." Esu put his hand in his pocket and brought out the two-colored cap saying, "As you can see, one side is white and the other is black. You each saw one side and, therefore, are right about what you saw. Are you not the two friends who made vows of friendship? When you vowed to be friends always, to be faithful and true to each other, did you reckon with Esu? Do you know that he who does not put Esu first in all his doings has himself to blame if things misfire?"

And so it is said,

"Esu, do not undo me,
Do not falsify the words of my mouth,
Do not misguide the movements of my feet.
You who translates yesterday's words
Into novel utterances,
Do not undo me,
I bear you sacrifices."

(Gates, 1988, pp. 32–35, quoting Ogundipe, 1978)

In this tale, the trickster constructs a "primal scene of instruction for the act of interpretation" (Gates, 1988, p. 5). This topos, which Gates traces in his studies of black oral narrative traditions, functions broadly as well, as a Hermes-like messenger bringing us an indeterminate, never-ending, interpretive process.

The villagers in this tale ought not to have simply believed what they saw (or thought they saw). Instead, they needed to invoke the principles of Esu. The lesson of this tale is that it insists "to the point of rupture of the always fragile bond of a human institution—on one determinate meaning, itself determined by vantage point and the mode one employs to see" (Gates, 1988, p. 35). I, too, needed to invoke Esu and read the conference papers as a trickster reader, finding indeterminacy and ambiguity rather than seeing only the color on one side of a two-colored hat (Levy, 1990). The trickster who made all the white people disappear from the train allowed me to see that I needed to read in a different way, a way that would allow me to question, to engage in a dialogue in which I could ask, essentially, "Might your hat have another side that is colored quite differently?" This, however, is hard to do alone. It is not by accident that the "Two Friends" tale takes place in a community that observes and comments on the events. The dialogue among the people of the village reflects what Bakhtin calls heteroglossia, the "locus where the centripetal and centrifugal forces collide" (Bakhtin, 1981, p. 428). Through dialogue, everything is understood as part of a greater whole, a cosmology that is constructed as a result of the continual interaction of meanings. Such an interaction took place throughout the weekend conference. The question "how do we know what we see?" was freed from the centripetal force which interred it in the preliminary drafts. The same questions instigated by the trickster were transported to the dialogic arena of the conference floor, where participants tugged at the meanings of papers that presented only one vantage point or seemed locked into one method. And that is what I learned at this conference.

References

Bakhtin, M. M. (1981). *The dialogic imagination.* M. Holquist (Ed. and Trans.) & C. Emerson (Trans.). Austin: University of Texas Press. (Original work published 1975)

Campbell, J. (1949). *The hero with a thousand faces.* Princeton, NJ: Princeton University Press.

Gates, H. L. (1988). *The signifying monkey: A theory of Afro-American literary criticism.* New York: Oxford University Press.

Levy, A. (1990). Frederick Douglass, Benjamin Franklin, and the trickster reader. *College English, 52,* 743–755.

Ogundipe, A. (1978). *Esu Elegbara, the Yoruba god of chance and uncertainty: A study in Yoruba mythology.* Doctoral dissertation, Indiana University, Bloomington.

Subject Index

Action, 52
After-school lab, 212, 229–230, 381
Alienation, 7
Articulation, 304, 305, 306
Authorship, 111, 114, 115, 117, 118, 120, 121, 330

Back-to-basics movement, 152, 358
Behavior, 52
Behaviorism, 126–128, 134
  biases, 127–128
Bidialectalism, 163, 165, 175
  code-switching, 163, 166
Bilingualism, 152, 165, 175, 237
  code-switching, 163, 166
  difficulties of, 163–164
Biliteracy, 237–239
Biological determinism, 154
Black English, 163
Burnouts, 8, 101

Case-study research, 138
Causal networks, 253–256, 266–267
Centrifugal force of language, 387, 391
Centripetal force of language, 386, 391
Choices, 369
Class, 46, 53
Classroom, 156, 157–158
  microethnography of, 164–165
Cognitive paradigm, 134–138
Cognitive psychological perspective, 93
Cognitive psychology, 8, 70, 246–247
Cognitive science, 247
Coherence, 44–45, 260–261
Cohesion, 44
Collaborative learning, xi, 5, 63
Common sense, 331
Communication, 169–170
  as interpersonal inferencing, 170–173
  political nature of, 347–348
Communicative competence, 22, 200–201
  education as, 377–378
Compatibilism, 36, 360–361
Compatibility
  among perspectives, 143–144
  of research forms, 19, 35–38
Composing process, 2–3
Composition, 304–306
  Hayes-Flower model of, 128, 129
Comprehension, 257–264
  coherence-theory, 260–261
  expository texts, 258–261
  inferences, 257–258
  narrative, 262–264
Computer metaphor, 127, 128
Computer models, 14, 247. *See also* QUEST
Concretization, 276–277
Conferences
  perspectives on literacy 1976, 1
  perspectives on literacy 1990, 2, 367, 385
Consciousness, 361
Construct
  bipolarity of, 353
  open, closed, 116
  terminology, relationship to, 23, 25, 26–27
  text as, 348
Constructedness, 276
Context, 46–48, 345–346
  in communication, 162–163, 170–171
  dependence, 47

  global, 346
  independence, 47
  writing and, 44–45
- Contextualization strategies, 172–173
- Continuum of reading materials, 43–44, 45
- Contrast elaboration, 251
- Conversation analysis, 53
- Conversational narrative, 75
- Corpus (corpora) of lesson, 40
- Critical literacy, 14, 319, 331–336, 358, 380–381
- Critical research, 319–320, 329, 331–336
- Critical science, 52
- Critical theory, 8, 14
- Cultural blindness, 30
- Cultural deprivation, 153
- Cultural diversity, 153
- Cultural ideology. *See* Ideology, cultural
- Cultural literacy, 3–4, 311–312

- Dialectic(s), 183, 185, 377
- Dialogic model, 69, 70, 78–79
- Dialogism, 83
- Dialogue, 70, 83, 86
- Differential learning, 151–152, 165, 174
  - reinforcement of, 167
- Disciplinary perspective, 8
- Discipline-based inquiry
  - extradisciplinary, 371
  - multidisciplinary, 371
- Discourse, 71–72, 166–168, 303–315, 379
  - -based interview, 77–79
  - conventions of, 93–94
  - discursive practice and, 307–315
- Discourses, 6, 14, 320, 321–323
  - interdependent, 308–309, 310, 314
  - multiple, 336
  - science, law, art, education, religion, 305–306, 312–313
  - subject positions, 309
- Discrimination, 313–314, 316
- Diversity, 6–7, 196. *See also* Cultural diversity; Linguistic diversity
- Domain assumptions, 36–37, 46–49, 51, 63–64
  - epistemology, 111–112
  - epistemological time, 119
  - of ethnomethodology, 41, 51
  - of sciences, 37–38, 46–49, 51

- Educability, 152, 154, 157, 173–174, 367
- Education, 181–182
  - as communicative competence, 200–201, 377–378
  - community involvement, 381–382
  - ethnomethodological studies in, 39–45
  - and intertextuality, 183
  - reproductive function of, 378
  - research and, 374–375
  - schooling, 169–170, 175
- Elicitation-response-feedback (ERF) sequence, 39–40
- Empirical construction, 387
- Empirical studies, value of, 289
- Empiricism, 61, 120
  - limitations of, 297–299
  - purpose of, 122
- Empowerment, 102, 356, 358, 378
- Enabling text, 44
- End-coding, 50, 53
- Epistemology
  - existence and, 113–114
  - poststructuralism as, 301
- Essentialism, 46–47, 347, 358
- Ethnocentrism, 30, 31
- Ethnography, 8
  - microethnography, 164–165
- Ethnomethodology (EM), 38–45
- Evaluation structure, 75
- Event, 6, 9, 13, 92, 94, 95, 97–98, 182–183, 185–192, 294
  - classroom, 190–191
  - construction of, 185–186
  - ideology of, 191–192
  - meaning as situated in, 186–190
  - particularity of, 192, 193–194
  - real, 188, 189
- Exemplar generation, 251

- Factualist orientation, 3, 5
- Feminism, 1, 15, 300, 302, 315–316, 322, 324–326, 330, 336

Fluent reading, 42, 43
Frame of reference, 41–42
Frame problem, 41–42, 60
Funds of knowledge, 4, 13, 106, 217, 381–382
  literacy in, 222–226
  source of, 217–218
  utilization of in classroom, 226–228

Gates-MacGinitie Reading Tests, 41
Gender, 100–102, 103, 104, 299–300, 322
Generic knowledge structures (GKSs), 262, 265
Gestalt, 134, 281
Global event structure, 286
Grammar, 47, 153, 154–155
  grammatical interference, 157

Head Start Project, 154
Hedges, 61
Hermeneutics, 36, 58
  rhetorical, 98
Hero's quest, 389
Heteroglossia, 83, 391
Hierarchies
  goal/action, 255, 267
  taxonomic, 255, 267
Historical relationships, 202–203
History, 9, 187, 377
Household analysis, 214
  exchange of knowledge, 216
  social networks, 216, 219
    with schools, 227–228
Humility, 362

Idealism, 59
Idealist(s), 10, 57–58
Identity, 46–47, 49
  context dependence/independence, 47, 49
  dialect, effect of on, 46–47
  end-coding perspective on, 50
  family resemblance, 47, 48, 164, 347
  gender, 100–102, 103, 104
  negotiation of, 190–191
  now-coding perspective on, 50–51
Ideology
  cultural, 183, 191–192, 198–199, 377
  construction of, 191–192
Incompatibilism, 36, 360–361
Inference generation, 246, 247, 257–264, 359
Inferencing, 170–173
Information explosion, 245
Information processing models, 128, 137
Innertextuality, 44
Inquiry, 36, 46, 49, 112, 357–359
  discipline-based, 371
  and measurement, 117
  open, closed, 355–357
  operationalism, 116–117
  stage of inquiry approach, 119
  and theory, 121–122
  and truth, 114–116
Instruction
  computer-based, 133
  ethnomethodological analysis of, 39–45
  inferencing, in, 171
  interactive, 212
  mediation, 287–288
  meaning-based, 212, 230–231, 382
  and text construction, 285–288
Instructions, 39–40, 277–278
Interaction
  classroom, 168–170
  conversant, 167–168
  reader-text, 276, 277, 279–281, 289–291
  student-student, 189
  teacher-student, 157–162, 173, 194
  teacher-student-class, 188–189
Interdependence, 300, 309, 314
Interpretant, 289
Interpretation, realist vs. idealist, 59–60
Interpretive justification, 334
Interpretive understanding, 58
Intertextual links, 95–96, 99
Intertextuality, 83, 183, 198–201, 346, 377
  and ideology, 198–199
Intuition, 120, 362

Jocks, 8, 101
Journal writing, 93, 96–97, 99, 104

- Knowledge
  - causal networks, 253–256, 266–267
    - goal/action hierarchies, 255, 267
    - scripts, 256
    - spatial structures, 255–256, 267–268
    - taxonomic hierarchies, 255, 267
  - contrast elaboration, 251–252
  - decontextualized, 189
  - domain specific vs. general, 105
  - engineering, 245, 248, 258, 262
  - exemplar generation, 251
  - free-generation protocols, 249–250
    - organization of, 252–253
    - question-answering, 250
  - information and, 7
  - packages, 256
  - probing subjects, 205–252
  - representation, 248, 252
  - schematic, 171–172
  - situated, 297–298
  - in social constructionism, 3
  - structures, 249, 256
  - traditional concept of, 3
  - world, 14, 245, 248–253, 359, 386

- Language, 151–152, 181
  - arbitrariness, 298
  - centrifugal force of, 387, 391
  - centripetal force of, 386, 391
  - in communication, 163–164
  - communicative nature of, 169
  - deficiencies, 153
  - descriptive, 117
  - in education, 156–157, 162–163, 171, 172–173, 175
  - functions of, 92
  - linguistic and cultural enrichment view, 157
  - models of, 156–157
  - particularity of, 196–197
  - across perspectives, 23, 354
  - school-primer based model of, 156
  - as social action, 175
  - social nature of, 143, 183
  - in social order, 164
  - speech correction model, 156
  - spoken, 156, 366
  - study of, 201–202
  - written, 156, 181, 366
- Langue, 182, 195, 285, 301, 378
- Linguistic(s)
  - deprivation, 153–154, 155–156
  - diversity, 152–153, 157, 168–169
  - pragmatism, 170
- Literacy, 237, 314–316, 365–366
  - assessment, 40–42
  - assumptions about, 2
  - biliteracy analysis, 237–239
  - conferences on, 1–2, 367, 385
  - critical, 14, 319, 331–336, 358, 380–381
  - cultural, 3–4, 311–312
  - development, 91, 92–93
  - development of, 4–5, 92, 365–366
  - discursive practice, 294–296
  - ethnic groups, 333–334
  - evaluation, 159–162
  - event(s), 6, 9, 13, 92, 94, 95, 97–98, 182–183, 184, 185–192, 294
  - funds of knowledge and, 222–226, 231
  - in the household, 225–226
  - in the information age, 7
  - institutional forces and, 5, 6, 7–8
  - instruction, 5–6, 152, 157–158, 173–174, 230–231
  - performance, 174–176
  - political aspects of, 295–296, 328, 347–348
  - power, 319–320
  - psychological vs. social components of, 143
  - research changes, 5–7
  - research models of, 204–205
  - resistance to, 366
  - skills, 40–42
  - social aspects of, 6, 293, 319
  - social construction, 3, 167–168
  - social context, 3–4
  - socialization, 14, 101–102
  - subjectivity, 312–314, 332
  - theory and practice, 299
  - universal, 151–152
- Literacy research, 357–358, 369–372
  - epistemological assumptions about, 111–112
  - ethics, 374
  - intuition and ideology, 353–363
  - methods, 359–360

  multidisciplinary perspectives on, 2–5, 7–10, 13–15, 380–381
  political nature of, 357–358
  problems of, 369–372
  shifts in conceptions of, 5–7
  stances applied to, 92–106
  topical divisions, 112
Literacy studies, 137–138
Literacy theory, 315, 325
  political nature of, 376, 377
Literary criticism, 112
Literary studies, 70
Literary symbol, 275, 289

Material, 183, 184–185
Meaning, 37, 183, 185, 186–190, 275–279, 321
  of actions, 36
  decontextualized, 189
Media, 321
  literary theory, 325
Metaperspective, 35, 38, 51–52, 61
Methodological imperative, 70, 80–83
Methodology, ix–x, 52, 113–114, 141, 344
  collaboration with teachers, 229–230
  of particular sciences, 35–36, 52
  participant observation, 222
  qualitative/quantitative, 58, 59
  shift, 4–5
  sociocultural, 237
  varieties within disciplines, 61–62
Methodomorphic theory, 81
Methods, 52, 135
  complementary, 61, 62–63
  demonstration function, 82
  of research, 80–81, 86
  staging function of, 82
Microethnography, 164–165
Modal qualifiers, 61
Model system, 211–212
Modernism, 310
Motivation, 12–13, 126, 133, 138
Multidisciplinary approach, 51–52
Multidisciplinary perspective(s), 2–5, 289–290

Narrative, 94
  comprehension of, 262–264
  facts, events, 280, 283, 290
  in exposition, 349
  research as, 349
  surface, 71, 74
New Criticism, 8, 279
Now-coding, 50–51

Object(s), 37
  class of, 46
  as tool, 48
Objectivism, 49–50, 51
Objectivity, 58, 297, 335
Operationalism, 116–117
Organization of this volume, 10–15
Otherness, 336

Paradigm(s), 303, 320, 344
  shifts, 134
  theoretical, 115
Parole, 182, 285, 301, 378
Particularism, 6, 48–49, 50, 51, 53, 192–197, 346
  vs. universalism, 354, 358–359
Particularity, 183, 192–196
Persona, author's, 130–132
Perspectives, 19–28, 29–30, 91, 141
  assumptions about, 19
  breadth of, 142–143
  communicative, 170
  comparison of, 29–30
  compatibility among, 143–144
  conflicts of (in research findings), 30, 31
  convergences, 360–361
  cooperation among, 120
  criteria for, 145–147
    consistency, 145–147
    presumption, 147
    scientific utility, 147
    scope, 146
    simplicity, 147
    stimulation, 147
  definition of, 20, 31, 112, 141
  disciplinary, 91, 92
  across disciplines, 21, 23
  diversity, 344
  evaluation of, 145–147
  explicitness of, 142–143
  goals of, 144

  - identification of, 142
  - influence of on findings, 22–28
    - example, 28–31
  - interactional, 168–170
  - interdisciplinary, 142
  - issues of, 112, 114, 141–142
  - multidisciplinary, 7–10, 182, 201
  - multiple, 19–22, 290–291, 373
  - phenomena
    - determination of, 142
    - relationship to, 20, 22, 27, 115
  - poststructuralist, 5, 102, 316
  - and the research process, 28–31
  - rhetorical nature of, 19, 28, 31
  - selection of, 20–28
  - selectivity, 22–23
  - tensions among, 2, 3, 344–345
  - terminologies, 354–355
  - transdisciplinary, 355
- Phallologocentrism, 302
- Phenomenological criticism, 276, 279
- Phenomenology, 50
- Pluralism, 334
- Poetics, 276
- Polarities, in research traditions, 57–58
- Positivism, 36, 297
- Postmodernism, 321–323
  - objections to, 323–330, 336
- Poststructuralism, 5, 102, 291, 300, 301–315, 316, 319–320, 377–381
  - meaning as contested, 320–321
  - limitations of, 312, 315–316
  - political practice, 321
  - and structuralism compared, 321–322
- Practicability, 44, 45
  - ratiocination, 50
- Probability vs. certainty, 60–61
- Procedural display, 190
- Product process model, 176
- Protocol analysis, 128
- Psychoanalysis, 302, 309
- Psycholinguistics, 154
- Psychological theory, 80
- Psychology, 52
  - paradigmatic, 136–137
  - rhetorical tradition of, 134–138

- Qualitative research, 10, 53, 57–64, 79
- Quantitative research, 10, 53, 57–64, 79, 299
- Quantification, 118
- QUEST (computer model), 245, 247, 265–269
- Question
  - initiation-response-evaluation sequence, 166
- Question-answering task, 250, 251
- Questioning, 249–250, 264–269

- Reader
  - as a historical entity, 326–330
  - implied, 278–279
- Reader-response criticism, 70
- Reader responses
  - information-driven, 12, 73, 79, 91
  - point-driven, 12, 73–74, 79, 91
  - story-driven, 12, 73, 91
- Reader-response theory, 8, 276, 291, 328
- Reader's Liberation Movement, 327
- Reader-text interaction, 276, 277, 280, 289–291
  - research framework, 279–281
- Reading, 42, 368–369
  - aesthetic, 71, 76, 77
  - conduit model, 71
  - continuum of materials for, 43–44, 45
  - as cultural activity, 42–45
  - dialogic model, 69, 78–79, 83
  - fluency, 42, 43
  - modes of, 71
  - point-driven, 12, 69, 73–74, 79, 91
  - rational/successful, 43
  - social model, 76–77
- Reading formations, 327
- Realism, 10, 57–58, 59
- Reasoning, 246
- Reception theory, 279, 288, 289, 291, 327
- Reflective text, 44
- Reinforcement, 126–127
- Remedial programs, 154, 156
- Research
  - collaboration, with teachers, 229–230
  - critical, 319–320, 329, 331–336
  - in education, xi–xii, 375–376

  ethnocentrism, 30
  ethnography, 10
  goals, 70
  multidisciplinary, 35, 380–381
  participant observation, 222
  qualitative, 10, 53, 57–64
  quantitative, 10, 53–57–64, 299
    rhetorical nature of, 118
  sociocultural approach, 212–213
  traditions
    cooperation among, 373, 374
    empirical, 61
    exclusivity, 59
Response, 185, 279
Rhetorical tradition, 134–138
Rigor, 361–362

Schematic theory, 1, 144, 147
Science, 36, 141, 144, 343
  critical, 52
  cultural, 37, 49–52, 53
  ethnomethodology and, 38–39
  human, 36, 51
  natural, 36, 37, 40, 49, 52
  social, 37, 49, 53
Semantic analysis, 170
Semantic differential scales
  informal/formal, 97
  spontaneous/predetermined, 97
Semiotics, 70, 191, 289–291
Sense, 278
Situation, 77, 86, 187
Situationism, 49, 50–51, 346
Skill and drill instruction, 4
Social action, 293
Social constructivism, 10, 115
Social interaction, 6, 38, 115, 121, 290
  rhetorical analyses of, 97–100
Sociolinguistics, 8, 13, 21, 75, 162–168
  microanalysis, 174–175
Sociology, 38
Spatial structures, 255–256, 267–268
Speech-act theory, 13
Stance(s), 72, 91
  combinations of, 92–93, 96, 107
  cultural, 91, 92, 100–104
  social, 12, 91, 92, 97–100
  textual, 12, 91, 92, 93–97, 99, 187
Standardized testing, 39, 41, 53, 60, 86
Statement nodes, 252–253
Statistical inference, 80, 81
  vs. individual variation, 80–81
Structuralism, 290, 321
  limitations of, 298–299
Student(s)
  nature of, 6–7
  resistance from, 366
Subjectivism, 49, 53
Subjectivity, 328, 330–331, 334, 356

Teacher(s)
  effectiveness, 39
  as researchers, 229–230, 356, 375
Teaching
  changing methods of, 5–6
  as an intentional act, 121
  as a linguistic process, 157–166
Telos, 36, 51, 52
Text, 275, 348–349
  Bakhtin's definition of, 83–86
  branching studies, 71–74
  coherence, 44
  as a construct, 348–349
  construction of, 280, 281–285
  conventions, 94–95
  enabling, 44–45
  independent, 279
  innertextuality, 44, 95–96
  instruction and, 285–288
  interaction with reader, 276, 277, 279–281, 289–291
  letter-framed, 74–76
  literary, 280
  mediation of, 275, 290
  models, 95
  reflective, 44–45
  studies of, 132
  transtextuality, 44
  and utterance compared, 84
Theory, 120–122
  relative to method, 80–83
  theoretical stance, 121
Think-aloud protocols, 95, 131, 250, 281–282
Traditions, interdisciplinary cooperation and, 211–212
Transactionalism, 354

Transtextuality, 44
Trickster narrative, 388–391
Truth, 58
  quest for, 114–116
  realism/idealism, 59–60

Universalism
  vs. particularism, 354, 358–359
Utterance, 83–86, 187, 203

Value, 368
Vision, 297
Voice, 304–305, 378

Writing, 48–49, 368–369
  author's persona in, 130–132
  motivation in, 133

Author Index

Abelson, R., 248, 252, 256, 260, 273
Agar, M., 30, 31
Allen, J., 248, 252, 264, 270
Althusser, L., 324–325
Anderson, A. B., 212, 240
Anderson, J. R., 248, 252, 270
Anderson, P. A., 265, 271
Anderson, R. C., 265, 270, 346, 350
Andre, T., 265, 270
Anson, C., 93, 107
Anyon, J., 214, 229, 240
Applebee, A., 3, 15, 95, 107, 108, 231, 241, 356, 363
Appleman, D., 96, 107
Aristotle, 46, 53
Aronowitz, R., 181, 205
Aronowitz, S., 307, 316
Atkinson, P., 201, 207
Austin, J. L., 37, 48, 50, 53, 170, 176

Bailey, F., 6, 9, 10, 13, 53, 94, 95, 97, 181, 290, 319, 343, 346, 347, 348, 354, 355, 357, 358, 376, 377, 381
Bakhtin, M., 69, 70, 80, 83–86, 87, 181, 183, 186, 191, 195, 203, 204, 205, 348, 378, 386, 387, 391
Balibar, E., 309, 316
Baratz, J., 157, 176
Barnes, D., 4, 15
Barsalou, L. W., 251, 270
Barthes, R., 325
Bartholomae, D., 105, 107
Bauman, R., 181, 205
Beach, R., 1, 12, 16, 35, 42, 91, 92, 93, 96, 103, 107, 181, 201, 257, 270, 277, 279, 291, 349, 354
Beaugrande, R. de, 71, 87
Becker, A. L., 182, 195, 204, 206
Bell, D., 293, 294, 296, 316
Bellow, S., 366
Bennett, A. T., 197, 209
Bennett, T., 327, 336
Benson, P., 132
Bentley, A. F., 354, 363
Bereiter, C., 147, 148
Berlin, J., 320
Bernstein, B., 155, 176
Bettelheim, B., 369
Biddle, W. B., 265, 270
Bizzell, P., 320
Black, J. B., 248, 249, 252, 270, 264, 271, 273
Blaustein, A., 132, 139
Bleich, D., ix, 276, 348, 350
Blinde, P. L., 211, 243
Bloom, A., 373, 382
Bloome, D., 6, 9, 10, 13, 53, 94, 95, 97, 99, 107, 181, 183, 187, 189, 198, 200, 203, 206, 288, 290, 291, 319, 343, 346, 347, 348, 354, 355, 357, 358, 376, 377, 381
Bogdan, D., 85, 87
Bond, S. J., 138
Booth, W., 71, 87, 97, 107, 276, 287, 288, 291
Borasi, R., 374, 382
Boring, E. G., 135, 138
Borko, H., 200, 206
Boru, K., 375, 383
Bower, G. H., 246, 249, 252, 258, 270, 271
Bradley, R., 50, 53
Brainerd, L. E., 265, 268, 269, 271
Brandt, D., 92, 107
Brecht, B., 295, 296, 316
Brennan, M., 74
Britton, J. N., 354, 363, 366
Brodkey, L., 6, 14, 91, 102, 104, 293, 296, 297, 299, 300, 304, 305, 308, 309, 311, 316, 317, 320, 343, 345,

347, 348, 355, 357, 367, 376, 378, 379, 380, 381
Brooks, P., 276, 291
Brophy, J. E., 39, 53, 116, 123
Brown, J., 106, 108
Brown, J. S., 253, 270, 348, 350
Brown, R., 3, 16, 257, 270
Bruce, B., 186, 206
Bruffee, K., 3, 16
Bruflodt, H. A., 249, 271
Bruner, J., 39, 54, 94, 108, 126, 346, 351
Burke, C., 238, 241
Burnett, R., 132
Burton, R. R., 253, 270
Butler, C. S., 61, 64
Butler, J. P., 326, 336

Campbell, D. T., 134, 139
Campbell, J., 388, 389, 391
Cantor, N., 249, 270
Carbo, M., 373, 383
Carey, L., 128, 139
Carnap, R., 36, 54
Carpenter, P. A., 264, 272
Carr, S., 375, 383
Carrasco, R., 183, 206
Carter, M., 105, 108
Cazden, C., 23, 31, 158, 176, 183, 200, 201, 205, 206
Chall, J., 373, 383
Chan, K. S., 211, 243
Chatman, S., 71, 87, 276, 287, 291
Chomsky, N., 127, 139, 194, 204, 206, 346, 350
Christian, B., 325, 336
Christian-Smith, L., 91, 108
Cicourel, A. W., 41, 54, 181, 206
Ciliberti, B., 4, 16
Clark, L. F., 248, 249, 250, 253, 262, 263, 265, 268, 271, 272
Clarke, S., 4, 15
Clifford, J., 325
Cohen, C. B., 325, 338
Cohen, E., 98, 109
Cohen, S., 181, 206
Cole, M., 6, 16, 211, 240, 243
Cole, P., 170, 177
Coleman, J. S., 227, 240
Collins, A., 348, 350
Collins, E., 19, 28, 32
Collins, J., 106, 108, 167, 177, 320, 321, 337
Comte, A., 57
Conlin, S., 229, 244
Connolly, P., 181, 206
Cook, T., 36, 55
Cook-Gumperz, J., 9, 13, 22, 31, 151, 167, 172, 177, 201, 344, 357, 361, 367, 368
Cooper, C., 276, 291
Copernicus, 125
Corsaro, W., 22, 32
Coulthard, R. M., 39, 50, 56
Coupe, P., 255, 256, 273
Cover, R. M., 315, 317
Crandall, J., 181, 206
Cremin, L. A., 156, 177
Crismore, A., 61, 64
Culler, J., 276
Curie, M., 125

Dahlgren, K., 252, 264, 270
Dale, T. C., 181, 206
Danziger, K., 69–70, 80–83, 86, 88, 359
de Kleer, J., 253, 270
DeJong, G., 260, 270
Delamont, S., 197, 206
Delgado-Gaitán, C., 212, 240
DeLone, R. H., 154, 177
Delpit, L. D., 358, 363
Derrida, J., 299, 322, 337, 381
Descartes, R., 326
DeStefano, J., 200, 206
Devine, J., 231, 240
Dewey, J., 354, 363
Díaz, R., 211, 231, 242
Díaz, S., 212, 242
Dickson, W. P., 182, 206
Dillon, J. T., 265, 270
Dilthey, W., 57
DiStephano, C., 337
Dobbert, M., 30, 32
Dorsey, S., 96, 107
Dorsey-Gaines, C., 197, 209, 212, 223, 243
Duffy, S. A., 248, 250, 273
Duguid, P., 106, 108
Duran, R. P., 163, 167, 177

Durkheim, E., 57
Durkin, D., 116, 123
Durst, R., 95, 107, 108
Dussel, E., 322, 337
Dyer, M. G., 257, 260, 264, 270, 272
Dyson, A., 96, 108

Eagleton, T., 277, 279, 290, 291, 311, 317, 327, 330, 337
Eckert, P., 4, 7, 8, 16, 101, 108
Edelsky, C., 238, 240
Eder, D., 167, 177
Eggins, S., 181, 209
Eisenhart, M., 200, 206
El-Diany, P., 3, 16
Elgas, P., 30, 32
Eliot, C., 370
Emig, J., 371
Erickson, F., 158, 164, 165, 177, 183, 187, 201, 206, 209
Erickson, R., 6, 16
Ericsson, K. A., 76, 88, 247, 250, 270
Everhart, R., 188, 207
Evertson, C., 20, 32
Eymard, L. A., 21, 270

Fagan, G. H., 319
Farnsworth, R., 61, 64
Farrar, E., 98, 109
Farrar, M. P. T., 39, 40, 54
Fechner, 135
Felden, D., 22, 32
Feldman, A. M., 15, 385
Ferdman, B., 100, 108
Fernie, D., 30, 32
Ferreiro, 29
Fillmore, C., 181, 207, 346, 351
Fine, M., 313, 314, 315, 317
Fingeret, A., 4, 16, 102, 108
Firestone, W. A., 120, 123
Firth, R., 189, 207
Fischer, M., 325
Fish, S., 279, 291
Fisher, T., 181, 207
Fitzgerald, J., 3, 5, 16
Flanders, 176
Flax, J., 322, 337
Florio, S., 116, 123, 165, 177, 201, 209
Flower, L., 10, 16, 128, 139, 250, 272
Forbus, K. D., 253, 270
Foucault, M., 6, 14, 16, 296, 299, 309, 310, 317, 321, 325
Frake, C., 191, 207
Franklin, S. P., 250, 253, 265, 271
Fraser, N., 334, 337
Freedman, K., 103, 107
Freire, P., 29, 320
Freud, S., 69, 81, 302
Frey, O., 100, 108
Fulwiler, T., 96, 108
Fung, H., 60, 65

Gage, N., 183, 207
Gage, N. L., 10, 16, 36, 54
Galanter, B., 255, 272
Galileo, 46, 125
Gallimore, R., 216, 229, 240, 243
Gamoran, A., 95, 98, 109
Gardner, H., 353, 363
Garfinkel, H., 38, 48, 50, 54
Garrison, J., 36, 54
Garrison, J. W., 36, 55
Gates, H. L., 389, 390, 391
Gee, J., 320
Geertz, C., 52, 54, 182, 183, 191, 196, 201, 202, 204, 207, 376, 383
Geisler, C., 105, 108
Gibson, J. J., 73, 88
Gibson, W., 276, 291
Gick, M. L., 246, 270
Giglioli, P. P., 176, 177
Gillespie, M., 181
Gilligan, C., 103, 108
Gilmore, P., 102, 108, 170, 177
Giroux, H., 307, 316, 319, 320, 321, 326, 329, 334, 337
Gitlin, A., 375, 383
Glatthorn, A., 170, 177
Glazer, N., 153
Glenn, C. G., 346, 352
Goetz, J., 36, 55
Goffman, E., 190, 207
Gold, C., 346, 352
Golden, J., 14, 22, 25, 26, 27, 32, 94, 275, 282, 284, 285, 286, 287, 288, 291, 292, 344, 359
Goldenberg, C., 216, 240

Golding, J. M., 258, 262, 263, 265, 269, 270, 272, 273
Good, T. L., 39, 53, 116, 123
Goodenough, W., 191, 207
Goodlad, J., 98, 108
Goodman, K., 212, 241
Goodman, K. S., 44, 54, 346, 351
Goodman, Y., 238, 241
Goody, J., 189, 207
Goswami, E., 78, 88, 99, 109, 181, 208
Gough, P. B., 42, 54, 346, 351
Gould, S. J., 82, 88, 154, 177
Graesser, A., 9, 14, 91, 94, 245, 246, 247, 248, 249, 250, 251, 253, 257, 258, 259, 260, 261, 262, 263, 264, 265, 268, 269, 270, 271, 272, 273, 274, 344, 359
Graff, H., 4, 16
Graham, K., 22, 25, 26, 32
Graham, P. A., 152, 177
Graubard, S., 103, 108
Graves, D., 212, 241
Green, J., 1, 10, 11, 19, 20, 22, 23, 25, 26, 27, 28, 30, 32, 33, 35, 52, 54, 91, 122, 167, 177, 181, 182, 183, 186, 196, 207, 229, 244, 286, 288, 291, 292, 344, 349, 354, 374
Greenberg, J., 211, 212, 214, 217, 218, 223, 224, 225, 230, 231, 232, 234, 235, 242, 243
Greenberg, J. B., 217, 240, 241
Greenberger, E., 106, 108
Greene, T. R., 105, 110
Grice, H. P., 170, 177, 194, 207
Griffin, P., 211, 240
Grimes, J. E., 346, 351
Grosjean, J., 175, 177
Grumet, M. R., 275, 292
Gumperz, J., 9, 13, 29, 32, 151, 163, 164, 166, 169, 172, 176, 177, 178, 181, 182, 185, 186, 188, 201, 207, 344, 357, 361, 367, 368
Gundlach, R., 15, 365, 366, 372
Guthrie, J. T., 284, 292

Haberlandt, K., 264, 271, 272
Habermas, J., 296, 317
Hackett-Renner, X., 265, 269, 271
Hakuta, K., 152, 175, 178
Hall, A., 314
Hall, S., 304, 305, 317
Halliday, M. A. K., 44, 54, 92, 108, 346, 351
Hammer, R., 321, 338
Hammersly, M., 201, 207
Hansot, E., 152, 178
Haramis, M., 229, 244
Haraway, D., 297, 298, 300, 307, 317
Harding, S., 299, 317
Harker, J., 20, 22, 25, 26, 27, 32, 52, 54, 182, 207
Harley, S., 264, 272
Harrison, W., 332, 334, 337
Harste, J. C., ix, x, xiii, 2, 181
Harstock, N., 325, 336, 337
Hartman, D., 349, 351
Hasan, R., 44, 54, 346, 351
Hatch, J., 130, 133, 139
Hawisher, G., 95, 109
Hayes, J., x, xi, 9, 12, 106, 125, 128, 132, 133, 138, 139, 250, 272, 344, 349, 354, 361, 367, 371
Haymes, S., 319
Heap, J., 9, 10, 11, 35, 39, 40, 41, 42, 43, 44, 45, 48, 53, 54, 60, 61, 64, 97, 184, 187, 188, 192, 207, 343, 344, 346, 347, 349, 355, 360, 373
Heath, S., 6, 16, 30, 32, 181, 203, 207
Heath, S. B., 173, 178, 212, 241, 294, 317
Hebdige, D., 321, 337
Hedges, L. V., 60, 65
Heidegger, M., 50, 54
Hemenway, K., 249, 256, 273
Hemingway, E., 74
Hempel, C. G., 36, 55
Hemphill, D., 265, 268, 269, 271
Henry, J., 304, 305, 309, 317
Herbart, J. F., 135
Hernandez, A., 319
Hernández-Chavez, E., 166, 178
Herrington, A., 78, 88
Hertwick, A., 168, 178
Heshusius, L., 36, 56
Hess, R. D., 153, 178
Hill, C., 130, 133, 139
Hillocks, Jr., G., 9, 10, 11, 35, 57, 63, 65, 79, 349, 355, 357
Hildyard, A., 237, 242

Hirsch, E. D., 245, 272, 311, 317, 373, 383
Hoffman, E., 365, 372
Holland, D., 191, 207
Holland, N., 276
Holub, R. C., 277, 279, 291, 292, 327, 337
Holyoak, K. J., 246, 270
Homans, M., 322, 337
Hood, L., 182, 200, 208
Hoogstra, L., 60, 65
hooks, b., 320, 337
Hopkinson, P. L., 249, 271
Horgan, D., 269, 271
Horkheimer, M., 297, 317
Howe, K. R., 36, 51, 53, 55, 119, 123
Huberman, A. M., 36, 55
Huck, S. W., 134, 139
Hull, C. L., 137, 139
Hull, G., 104, 108
Hunt, R. A., 11, 14, 69, 70, 73, 79, 82, 88, 89, 91, 92, 98, 107, 118, 119, 344, 345, 347, 348, 359, 360
Hursh, D., 373
Husserl, E., 46, 50, 55
Hymes, D., 171, 176, 178, 182, 186, 207, 208
Hynds, S., 15, 92, 107, 277, 291, 353

Inden, R., 329, 337
Ingarden, R., 276, 277, 292
Isard, M., 346, 351
Iser, W., 14, 276–279, 282, 288, 289, 292, 348, 351

Jameson, F., 324, 337
Jefferson, G., 39, 53, 56, 194, 209
Jennings, K., 54
Jennings, S., 54
Jenkins, J., 69, 77
Jewett, J., 79, 89
John, V., 176
Johnson, M., 25, 32
Johnson, N., 286, 292
Johnson, P. N., 264, 272
Johnson-Laird, P. N., 246, 272
John-Steiner, V., 181, 208
Johnston, P., 95, 108
Johnstone, B., 214, 245
Jordan, C., 212, 243
Just, M. A., 264, 272

Kaestle, C., 369
Kamil, M., 1, 13, 35, 141, 349, 358
Kantor, R., 30, 32
Kaplan, A., 36, 55
Kaplan, E., 324, 325, 337
Kaufer, D., 128, 139
Keenan, J. M., 257, 273
Keller, E. F., 356, 363
Kellner, D., 323, 337
Kelly, G., 353, 363
Kemmis, W., 375, 383
Kinneavy, J. L., 297, 317
Kintsch, W., 44, 56, 257, 260, 261, 272, 287, 292
Klein, E., 30, 32
Kohler, W., 81
Koizumi, D., 264, 271
Krashen, S., 346, 351
Kuhn, T., 141, 148, 303, 317, 373, 383
Kuipers, B., 272

LaBerge, D., 42, 55
Labov, W., 73, 75, 88, 159, 178, 346, 351
Lacan, J., 299, 302, 309, 310, 311, 312, 317, 324
La Fontaine, J., 214, 226, 241
Lakoff, G., 25, 32
Lang, K., 269, 271
Langer, J., 95, 108, 212, 231, 237, 241, 360, 363
Lankshear, C., 320, 338
Larkin, K. M., 348, 350
Lash, S., 321, 337
LeCompte, M., 36, 55
Lehnert, W. G., 252, 264, 272
Leichter, H. J., 226, 241
Leiter, K., 54
Lemke, J., 181, 183, 198, 208
Lennox, S., 325, 337
Lentricchia, F., 321, 328, 338
Lessnoff, M. H., 112, 123
Levinson, S. C., 170, 178
Levy, A., 390, 391
Lewin, K., 81
Lewis, E. W., 249, 271

Lewis, O., 153, 178
Liu, L., 264, 273
Lofland, J., 78, 88
Lofland, L. H., 78, 88
Long, D. L., 262, 263, 272
Lundeberg, M., 105, 109
Luria, A. R., 48, 55, 213, 242
Lyotard, 323

Macedo, D., 320
Macherey, P., 309, 316
Mack, R. L., 248, 250, 273
Macleod, J., 166, 174, 178
Macmillan, C. J. B., 36, 55
Magliano, J., 9, 14, 91, 94, 245, 344, 359
Mailloux, S., 98, 109, 279, 292
Maldonado-Guzman, A., 183, 206
Mandler, G., 251, 271
Mandler, J., 286, 292
Marcus, G., 325
Marcus, J., 294, 317
Marshall, J., 326, 338
Martin, J., 181, 209
Mascia-Lees, F., 325, 338
McDermott, R., 182, 200, 208
McDermott, R. P., 158, 165, 178
McKay, R., 54
McKeown, K. R., 254, 272
McKoon, G., 257, 260, 261, 272
McLane, J. B., 366, 372
McLaren, P., 4, 14, 91, 319, 320, 321, 329, 337, 338, 343, 345, 357–358, 367, 376, 379, 380, 381
McNamee, G. D., 366, 372
McRobbie, A., 321, 338
Mead, M., 189, 208
Medin, D. L., 255, 273
Medvedev, P. N., 191, 204, 205, 208
Meehl, P., 112, 123
Mehan, H., 39, 54, 55, 152, 166, 168, 173, 178, 194, 204, 208, 214, 242
Meihlis, J. L., 168, 178
Merod, J., 324, 338
Meyer, B. J. F., 252, 272, 346, 351
Meyer, C., 30, 32
Michaels, S., 200, 205, 208
Michaels, S. A., 167, 178
Miles, M. B., 36, 55
Milgram, S., 82
Milhevc, J., 333, 338
Mill, 57, 135
Millen, J., 85, 87
Miller, A. G., 82, 88
Miller, G., 22, 32
Miller, G. A., 126, 127, 139, 255, 272, 346, 351
Miller, P. J., 60, 65
Millis, K. K., 250, 258, 259, 260, 261, 265, 270, 272
Mintz, J., 60, 65
Mischel, W., 249, 270
Mishler, E. G., 22, 32, 33
Mitchell-Kernan, C., 165, 178
Mohan, R., 334, 338
Moll, L., 4, 9, 13, 91, 106, 202, 211, 212, 213, 217, 218, 223, 224, 225, 229, 230, 231, 232, 234, 235, 242, 344, 346, 347, 348, 349, 357, 367, 376, 381, 382
Mook, D. G., 80, 88
Morgan, D., 250, 258, 259, 260, 261, 272
Morgan, J. P., 170, 177
Morine-Dershimer, G., 21, 27, 28, 33
Morris, C., 288, 289, 292
Morrison, T., 314, 318
Morton, D., 333, 338
Mosenthal, P., 200, 208
Moss, G., 100, 109
Moynahan, D., 153
Moynihan, D. P., 314, 318
Murachver, T., 265, 268, 269, 271, 273
Murray, K., 250, 251, 269, 271, 273

Na, T., 200, 208
Nagel, E., 36, 55
Nakamura, G. V., 271
Neimeyer, R. A., 251, 273
Newell, A., 255, 273
Newell, G., 95, 107, 127, 128, 139
Nicholson, L., 330, 338
Nieto, S., 187, 206
Nietzsche, F., 328
Nisbett, R. E., 248, 273
Norman, D. A., 252, 273
Nunberg, G., 152, 178
Nystrand, M., 3, 6, 16, 95, 97, 98, 109, 115, 123

O'Barr, W., 181, 208
O'Neill, M., 319
Oakes, J., 229, 242
Ochs, E., 181, 209
Odell, L., 78, 88, 99, 109, 181, 208
Ogbu, J. U., 102, 109, 152, 166, 179
Ogundipe, A., 390, 391
Olbrechts-Tyteca, L., 297, 318
Olson, D. R., 45, 55, 84, 213, 237, 242
Olson, G. M., 248, 250, 273
Ong, W., 186, 298
Ortony, A., 346, 351

Paley, V., 197, 208
Palinscar, A. S., 212, 243
Parke, R. D., 22, 33
Pascual-Leone, J., 144, 147, 148
Pearson, P. D., x, 1, 15, 16, 343
Penner, B. C., 105, 110
Pepinsky, H., 200, 206
Perelman, C., 297, 318
Perfett, C. A., 246, 273
Perkins, D., 105, 109
Peters, M., 326, 338
Philips, S. U., 22, 33, 165, 179, 194, 208
Phillips, D. C., 119, 123
Piaget, J., 29, 81
Piazza, C., 20, 22, 24, 33
Piestrup, A. M., 160–161, 165, 179
Pirsig, R. M., 343, 351
Pitt, A., 85, 87
Plato, 46, 55
Polyani, L., 73, 75, 88
Polyani, M., 281, 292
Poovey, M., 4, 16, 104, 109
Popper, K., 115, 122, 123
Porter, R. P., 175, 179
Post, T. A., 105, 110
Poster, M., 321, 335, 338
Postman, L., 346, 351
Potts, G. R., 257, 273
Potts, R., 60, 65
Powell, 98
Pressley, M., 3, 16
Priban, K. H., 255, 272
Puro, P., 189, 200, 203, 206
Purves, A., 95, 109
Putnam, L., 100, 109

Quantz, D., 319
Quine, W. V. O., 46, 55
Quinn, N., 191, 207

Rabelais, F., 387
Rabinowitz, P., 97, 109, 278, 292
Rakow, L. F., 101, 109
Ramirez, A., 21, 27, 33
Ramsey, P. D. K., 214, 243
Ratcliff, R., 257, 260, 261, 272
Ray, W., 277, 279, 292
Reddy, M. J., 71, 88
Reder, L. M., 264, 273
Reichardt, C., 36, 55
Reiser, B. J., 248, 273
Reither, J. A., 79, 89
Resnick, D., 151, 179
Resnick, D. P., 175, 179
Resnick, L., 151, 179, 189, 208
Rhodes, N. C., 181, 206
Richards, I. A., 284, 292
Rickert, 57
Ricouer, P., 195, 208
Rist, R. C., 28, 33
Rivière, A., 213, 243
Roberts, R. M., 265, 269, 271
Robertson, S. P., 265 271
Robinson, J., 186, 208
Rogers, T., 96, 109
Rorty, R., 3, 16, 36, 55
Rose, M., 3, 16, 95, 104, 108, 109, 366, 372
Rosenblatt, L. M., 3, 16, 71, 73, 77, 88, 348, 351, 354, 360, 363
Roth, D., 54
Rowe, D. W., 115, 119, 120, 121, 123, 349, 351
Rubin, D. C., 85, 88
Ruddell, R. B., 42
Rudman, M., 181
Rumelhart, D. E., 42, 56, 191, 208, 252, 273, 346, 351
Rushdie, S., 312
Ryle, 48

Sacks, H., 22, 33, 39, 53, 56, 182, 187, 194, 208, 209
Salomon, G., 105, 109
Samuels, S. J., 42, 55

Sanders, T., 200, 206
Sandler, H. M., 134, 139
Sarason, S. B., 227, 228, 229, 231, 243
Sarup, M., 323, 338
Saussure, F. de, 182, 195, 209, 285, 292, 378
Savignon, S., 346, 351
Saxe, G., 103, 109
Sayles, J., 386
Schank, R., 96, 109, 248, 252, 256, 260, 273
Schegloff, E. A., 39, 53, 56, 182, 187, 194, 209
Schieffelin, B., 181, 209
Scholes, R., 289, 292, 324, 338
Schön, D., 362, 363
Schriver, K. A., 128, 130, 132, 133, 139
Schultz, J., 187, 201, 206, 209
Schutz, A., 36, 37, 52, 53, 56
Schwartz, J., 249, 270
Scribner, S., 6, 16, 211, 243
Scollon, R., 181, 209
Scollon, S., 181, 209
Scully, J., 338
Searle, J. R., 39, 56
Shanahan, T., 1, 12, 35, 111, 117, 123, 349, 356
Shanon, B., 264, 273
Sharpe, P., 325, 338
Sheedy, J. R., 374, 382
Shipman, V. C., 153, 178
Short, K., 6, 16, 96, 109
Short, K. G., 349, 351
Shuman, A., 190, 202, 209
Shuy, R., 21, 27, 33
Shuy, R. W., 157, 176, 179, 346, 351
Siegel, M., 15, 373, 374, 382, 383
Simon, H. A., 76, 88, 127, 128, 139, 247, 250, 255, 270, 273
Sinclair, J. M., 39, 50, 56
Singer, M., 264, 273
Sizer, T., 98, 109
Skinner, B. F., 126
Smith, A. E., 255, 273
Smith, B. H., 371, 372
Smith, C., 374, 383
Smith, D., 182, 197, 209
Smith, F., 346, 351
Smith, H. Z., 294, 296
Smith, J. K., 36, 56, 57, 58, 59, 60, 65, 118, 123
Snow, C. E., 194, 209
Sola, M., 197, 209
Solsken, J., 181
Spanos, G. A., 181, 206
Speaker, R., 42, 55
Sperry, L. L., 60, 65
Spilka, R., 132, 139
Spillers, H., 314, 318
Spindler, G., 30, 33
Spiro, R. J., 348, 351
Stack, C., 217, 243
Stanley, J. C., 134, 139
Stein, N. L., 346, 352
Steinbeck, J., 350, 352
Steinberg, L., 106, 108, 211, 243
Stenhouse, L., 375
Stephanson, A., 324, 338
Stephens, D., 15, 343
Stevens, A. L., 255, 256, 273
Stokes, S., 212, 240
Stone, M. H., 64, 65
Stott, F. M., 366, 372
Stratman, J. F., 128, 139
Street, B. V., 204, 209
Stubbs, M., 194, 209
Svensson, C., 94, 109
Swartz, N., 50, 53

Tannen, D., 22, 33, 100, 110, 175, 179, 182, 209
Taylor, D., 181, 197, 209, 212, 223, 225, 239, 243, 373, 383
Tenenberg, M., 21, 27, 33
Terkel, S., 197, 209
Tharp, R., 212, 229, 243
Theodorou, E., 189, 200, 203, 206
Thompson, K., 331, 338
Thoreau, H. D., 361
Tidwell, P., 9, 14, 91, 94, 245, 344, 359
Titus, J. J., 40, 56
Todd, A., 181, 207
Todorov, T., 195, 204, 209, 276, 292
Tompkins, J., 100, 110
Torrance, N., 237, 242
Toulmin, S., 297, 318
Trabasso, T., 252, 253, 264, 273

Treichler, P., 4, 16
Tulving, E., 346, 352
Tung, R., 313, 316
Turner, T. J., 249, 270
Tversky, B., 249, 255, 273
Tyack, D. B., 152, 178
Tyler, S., 204, 209

Updike, J., 72, 73, 85
Urry, J., 321, 337

Valsiner, J., 213, 243
van den Broek, P., 252, 253, 264, 273
van der Meij, H., 269, 271
van Dijk, T., 44, 56, 257, 260, 272, 286, 287, 288, 292
VanLehn, K., 248, 250, 273
Van Maanen, J., 28, 33
Vélez-Ibáñez, C. G., 212, 214, 217, 218, 223, 225, 230, 240, 243
Venezky, R., 4, 16
Vilardi, T., 181, 206
Vipond, D., 11, 14, 69, 70, 73, 79, 82, 89, 91, 92, 98, 107, 118, 119, 344, 345, 347, 348, 359, 360
Vogt, L., 212, 243
Vološinov, V., 183, 184, 186, 191, 204, 209
Voss, J. F., 105, 110
Vygotsky, L. S., 211, 212, 213, 243

Wagner, D., 4, 16
Wallace, C., 212, 244
Wallat, C., 20, 22, 24, 33, 186, 196, 207, 209, 229, 244
Watson, C., 238, 241
Watt, I., 189, 207
Weade, K., 22, 25, 26, 32
Weber, M., 135
Weber, M., 36, 45, 52, 56, 57, 183, 209
Weber, R. M., 231, 244
Weedon, C., 320, 338
Wellman, B., 217, 244
Wells, C. G., 155, 179
Welsh, S. D., 333, 338
Wertheimer, M., 81
Wertsch, J. W., 213, 244
West, C., 324
Whiting, J., 126
Wignell, P., 181, 209
Wilensky, R., 255, 274
Wilk, R., 217, 244
Willett, J., 181, 210
Williams, R., 58, 65
Wilson, T. D., 248, 273
Wilson, T. P., 36, 37, 52, 56
Winfrey, O., 314
Winnicott, 369
Winograd, P., 95, 108
Winston, P. H., 248, 274
Wittgenstein, L., 47, 48, 50, 56
Wolf, D., 96, 106, 110
Wolf, E., 217, 244
Woll, S. B., 249, 274
Woods, W. A., 264, 274
Wright, B. D., 64, 65
Wundt, W., 81

Young, C. J., 264, 272
Yudice, G., 334, 338

Zaharlick, A., 30, 33
Zavarzadeh, M., 330–331, 333, 338, 339
Zinsser, C., 181, 210

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